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The Mining Journal,

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No. 2424.—VOL. LII.

LONDON, SATURDAY, FEBRUARY 4, 1882.

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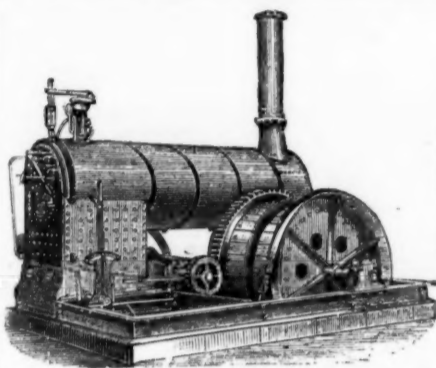
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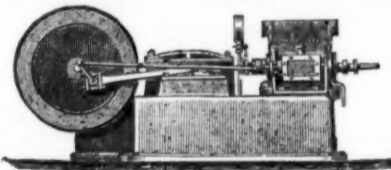


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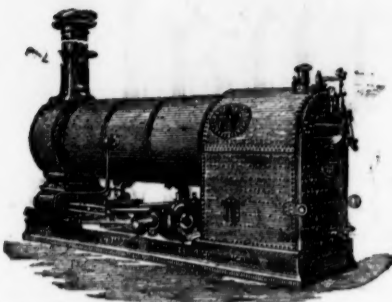
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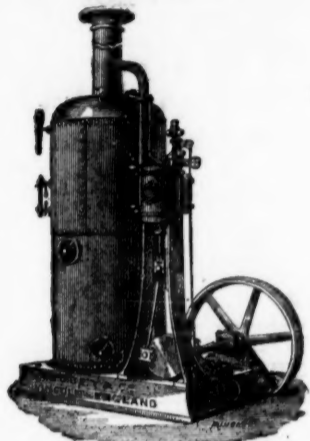
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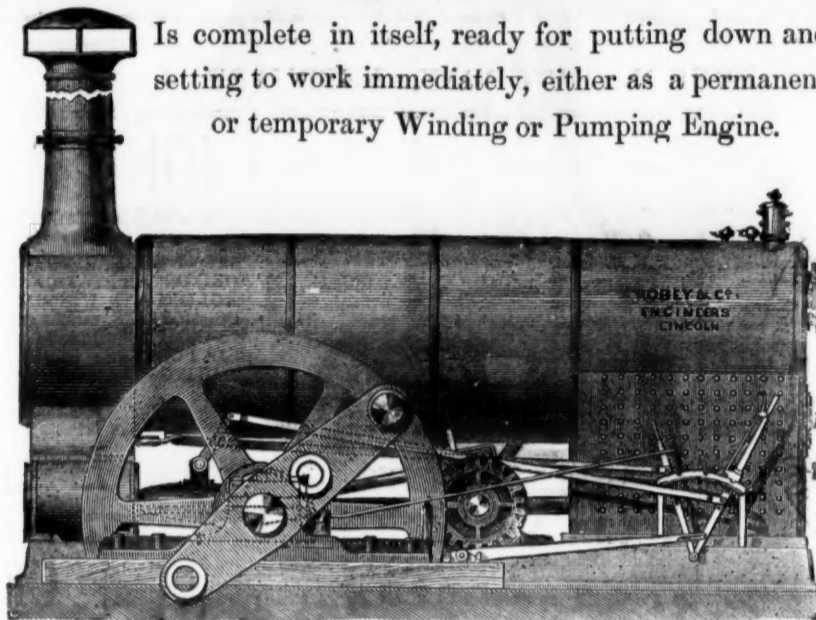
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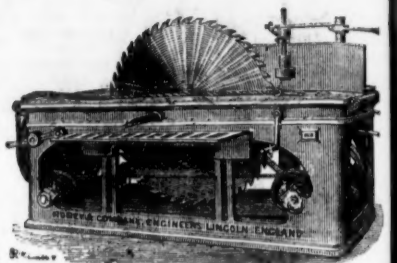
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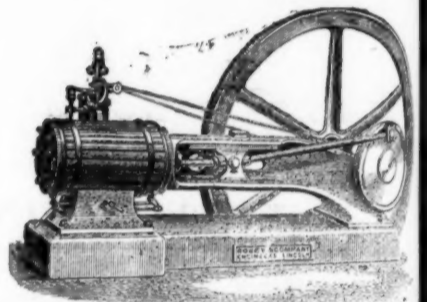
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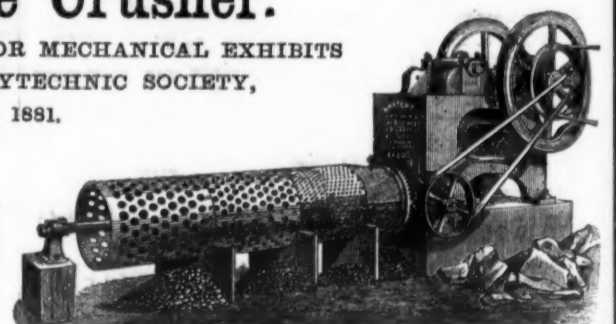
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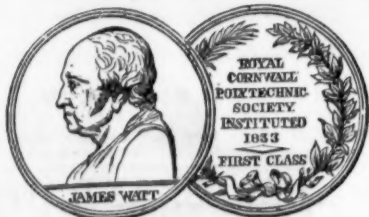
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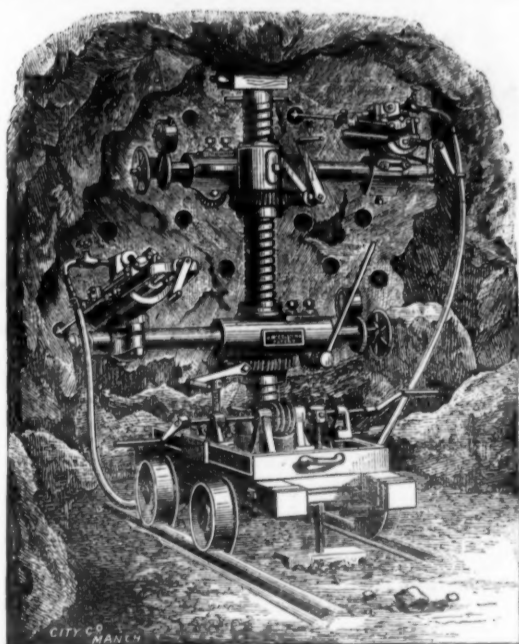
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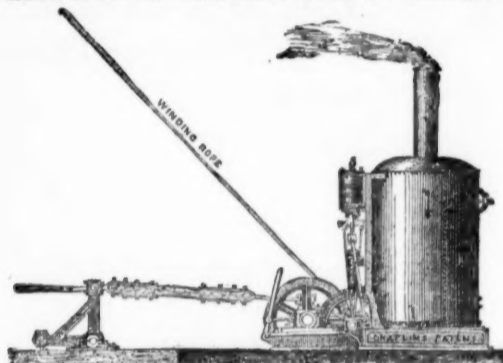
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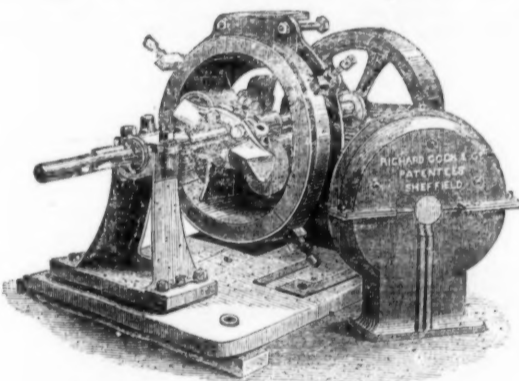


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Original Correspondence.

MYSORE REEF COMPANY.

SIR,—Your correspondent, "C. F.," asks why the shares of this company occupy, and have occupied, so low a position in the Share List. The answer must be of value, or of confidence, or due to persistent realising; at least, I so take it, but there is another element which comes in and may have its effect, and that is its foundation and management. As readers of the Journal know, it was introduced and advocated by Mr. Peter Watson, and he is London manager, and no more respected a name could be desired, and it gave great weight to the company. A few weeks ago we had a letter from his office detailing the retirement of two directors, Messrs. Wilson and Southgate, holders of 100 shares, and it appeared from that letter also that a reorganisation of the London management could then take place, resulting in a saving of 1250*l.* yearly. Mind, "saving." What, then, does the London management cost is a pertinent question. Again, reviewing the value of reports of Prof. V. Simons, on the Haven Gold Company's case (see last week's Journal), who reported on an unseen and possibly non-existent mine, let us not forget that he reported likewise on the Mysore Reef Company's "reefs." Again, referring to the extract from the Leadville Mining Index, in this week's Journal, respecting the Olathe Company, one is struck by the fact that the same Chairman, Mr. T. E. Foakes, is—according to Skinner's Year Book—chairman of that company, the above Haven, and Mysore Reef; and if there is any truth in the Leadville paper's statements, position being admitted in the Haven, I should much like to know what directors consider their duty. It is quite clear they cannot in some cases (and I fear in most) make such enquiries before lending their names as any business man would do in purchasing anything on his own account, while they should be doubly careful as trustees for others. Are they? J. H. ALLEN.

Liverpool, Feb. 1.

THE GOLD AND DIAMOND FIELDS OF SOUTH AFRICA.

SIR,—The year 1882 does not open as bright for South Africa as I could wish. Messrs. Gan, Locke, Goodliffe, and Co. have succumbed to the speculation of diamond mining scrip. Mr. McKenzie, of Cape Town, has also been obliged to surrender his estate, with liabilities to the amount of 451,570*l.* 4*s.* 4*d.*, of which 288,090*l.* 10*s.* is represented by diamond mining scrip, which were sold to him at most absurd prices. How a person of such general business aptitude as Mr. McKenzie should be led into such extensive mining speculations without professional advice I cannot understand. In my opinion the surrendering of his estate is the best thing that could have happened, inasmuch as the diamond mining scrip which he held are not worth more than 9000*l.*, or thereabouts. The only companies that are likely to pay dividends in the Kimberley Mine during 1882 are—the Standard, 20 per cent. for the year; Rose Innis, 15 per cent.; French, 36 per cent. (ought to pay 50); British, 40 per cent.; Barnato, 32 per cent. for the year. The Central Company is likely to pay at least 80 per cent. for the year. Capitalists will do well not to touch any companies in the Kimberley Mine unless those named, inasmuch as many claims are buried under fallen reef; in many others the diamond soil will not pay to wash after it has been broken and sent to the surface; and many claims valued at high prices exist only on paper.

The latter is a fact to which I wish to draw the particular attention of capitalists, because I notice that some of your correspondents make the Kimberley diamond formation to consist of 800 claims of 30 ft. square, whereas at no time has the Kimberley formation consisted of more than 4164 claims of 30 ft. square—equal to 376,625 square feet. The formation is somewhat oval in shape, and the sides all round incline towards the centre; consequently, from the surface to the extreme bottom of the mine about two and a-half claims have cut out all around the formation. This is a very unpalatable fact to reef claimholders, but it is a fact nevertheless. The Central and French Companies are so situated that they will have diamond soil so long as the mine is capable of producing a load. Some of your contemporaries ask why I do not name the worthless companies. This is quite unnecessary when I name the only companies that I know to be good. The news from Bultfontein is by no means satisfactory; there appears to be an unproductive layer coming in at one side, which is cutting out the payable diamond soil. It may be only temporary, but at present it looks serious. The Kamfersdam Company intends washing for diamonds in a few days, and the shareholders are looking forward to the result with a great deal of anxiety. The stuff looks very well, and I have very little doubt in my own mind but what it will turn out all right. At Jagersfontein there is some very rich ground, which, if properly managed, would pay well, but cannot possibly pay under existing circumstances. Koffyfontein does not improve as yet, but there is a fair prospect of getting a payable mine if properly conducted. Olifantfontein is of no value, and the Victoria Mine and Taylor's Kopje are of the fishy type. At Otto's Kopje they have again commenced to haul water, but I think they had better save their money.

The curse of Kimberley is the wealthy illicit diamond buyers, who, the local papers say, get others to buy for them. There is scarcely a day passes that one of our local papers do not refer to the big fish, who are the main stay of the illicit traffic, who they say are never caught. Now, to write in this way they must have some particular individual or individuals in their mind. The persons who have already been convicted of illicit diamond buying begin with the raw Kafir, the civilised Kafir, the low canteen-keeper, and the proprietors of good hotels; clerks, shopkeepers, and big diamond merchants; and even a Town Councillor has been tried and convicted of the crime—and yet the papers say none of the big illicit have ever been caught. Now, the people of Kimberley who are classed big ones above a Town Councillor are very few indeed; and, consequently, when the papers say no big ones have been caught it reduces the circle to a minimum.

The Mining Board elections took place on Jan. 3, and if their conduct on that occasion is a fair sample of what we are to expect during the current year I say God help the legitimate and good companies. Mr. Caldecott, on behalf of the French Company, protested against the disgraceful manner in which dummy votes had been arranged for the purpose of carrying the election in favour of unprofitable companies. The following, cut from this morning's Diamond News, gives a good idea of the state of affairs:—

MR. CORYDON: I also have a protest from the Central Company. [Mr. Corydon proceeded to read a similarly worded protest.] Now, Sir, in support of that protest I would call your attention to the fact, and I submit that your Worship is bound to take judicial notice of it—that 1-60th of a half of a particular claim on the reef belonging to Mr. O. J. Skell was transferred on Friday or Saturday last without good and valuable consideration to dummy holders for the purpose of manufacturing faggot votes, and unduly influencing the election. MR. HARRISON: I am using the words advisedly. I say that 1-60th of half a claim has been transferred without valuable consideration to dummy holders for the purpose of influencing the election. I would call the attention to the fact that these portions of claims were only transferred on the last day of last year, and I would also call attention to the fact that no objections have been called for so as to prevent the manufacture of votes in order to swamp the representatives of the largest companies in the mine, who hold hundreds of thousands of pounds worth of property. I respectfully submit that these men are not bona fide holders of rateable property, and unless you consider they are they are not entitled to vote.

Some of your contemporaries may rail at me for showing up the shady side of Kimberley; but I say, without fear of contradiction, that the Mining Board is ruining the Kimberley Mine—and notwithstanding the almost fabulous richness of the French and Central Companies, I would not advise capitalists to invest in any mine under such control. The Government has acted wise on one occasion towards the Kimberley claimholders. It will do well to go a little further, and substitute the Mining Board by a Commissioner of Mines. News from the Transvaal is very unsatisfactory, as several border chiefs are at war with each other. One party is said to be led by Englishmen, another by Dutch. I have just seen several diggers from the Transvaal gold fields. They complain of the Government repealing the Gold Laws after the place has been declared public for so many years; but they say, with the exception of nine claims held by a few Australian diggers, Pilgrim's Rest gold field is exhausted. They say the place, too, is very unhealthy, and not fit for Europeans.

They speak highly of some parts of the country, and if the Government act honestly towards the diggers they shall go back again. I have heard before that Pilgrim's Rest has been exhausted; consequently capitalists must be careful to send their own inspectors to examine anything that may be offered from Pilgrim's.

The Kimberley Waterworks progress very satisfactorily. The share market has been dull, probably owing to the Christmas holidays, which lasted about ten days.

Kimberley, Jan. 5.

GREAT SOUTHERN MYSORE GOLD MINING COMPANY.

SIR,—The reluctance which actuated Mr. Richard Barker, M.E., F.G.S., to publish his letter of Jan. 11, signed "Fjan Roo Chak," and that in the Journal of Jan. 28 with his own name attached, is very apparent indeed. Whatever his object may be or his interest in this company the discussion of Siamese matters can have nothing whatever to do with this company's affairs, neither can it place this company in a better or worse position; therefore, he will excuse me if I decline to have anything to say about the Siamese gold mines, which matters appertain only to the Siamese Government. At a proper time and on a proper occasion I am fully prepared to discuss it. As to Mr. Barker's assertion that "gold mining by Europeans in Siam was practically at an end when his Excellency the Kalahome stopped the finances of this Excellency the Kromatah," I most emphatically say that he knows nothing whatever of the matter, as neither the one or the other had control of such finances, either directly or indirectly, in their respective capacities in connection with the Siamese Government. Mr. Barker seems to take a little pride in showing that he has seen something of Siam; but allow me to tell him that there are other "living engineers" who have seen a great deal more of and in Siam than he has ever even dreamed of. Having a knowledge of his visits to Siam I know that his knowledge of Siam is very limited and superficial, and if his knowledge of mining is not more accurate than that of Siamese matters he is not very likely to undo much of the serious injury to gold mining which he accuses me of having done. I would ask Mr. Barker which "is entitled to the respect of all right-thinking men?" My "frank and manly defence" against his letter of Jan. 11, or the "injury I was doing to gold mining generally," as his remarks on this point seem to me to be rather vague. Whichever it may be, or whether he intended that both remarks were entitled to this respect I own he is quite right, as he has not stated where the information was derived from that I was "fifteen years in the employ of the Siamese Government," neither has he vouchsafed any information as to what gold mining companies were injured by any remarks made by me. Mr. Barker also accuses me of persistent attacks on this company, and quarrelling with my bread and butter; neither of these statements are at all consistent with facts. I have in no way attacked the company. I have simply defended myself from the attacks they made on me in the report issued by the directors, which I have no doubt Mr. Barker has had the pleasure of perusing. As to quarrelling with my bread and butter I cannot yet afford to do so—perhaps from the consciousness that I would much rather earn a crust of bread or a "tatey paste" by the sweat of my brow than I would roll in luxury at the expense of knowingly wronging others. Whatever Mr. Barker may consider about the matter I have an easy conscience—a little matter with which Mr. Barker is possibly not much troubled—in knowing I did both the property, the company, and myself the fullest justice in condemning it as not being worth prospecting. I did the company justice in telling them so, and I did myself justice by not holding out hopes to the company which I did not believe in myself, and had the directors acted in the same spirit of justice they would either have discharged me and appointed someone else in my place, or have placed the matter before the shareholders for their consideration when they received my letter of June 11, 1881. This commends itself to "every right thinking man." In speaking of India as a country which has produced gold for centuries it has no bearing whatever on the property of this company any more than the fact of gold having been found in Wales has to do with an assertion that a paying gold mine might be found in the limestone quarries of Derbyshire, the coal formations of different parts of the British Isles, or the chalk cliffs of the south-east coast of England. Neither does the sketch of "a gold field," shown by Mr. Barker, bear the least comparison with the property in question. As to "running a trial level right across a square mile block," I own that—as Mr. Barker shows—I did not do it, neither was it possible to do so there, seeing I had only a quarter of a square mile block to operate on, and whatever may be Mr. Barker's method of prospecting, I prospect the property enough to convince myself of the value of it before I ventured to send an opinion to my directors, although my first thoughts on examining the property were—"Well, if I find a paying gold mine here I shall never wish to see another."

In conclusion, allow me to notice a remark of another correspondent—"A Careful Examiner." He states that "irrespective of the value of the mine, Mr. Barker would have remained to conduct the work there had not his *amour propre* been wounded by having to consult a 'superior.'" Whether he may believe my statements to be correct or not, and whether he believes the affair to be a swindle or not, I can assure him that no consideration would have kept me there as long as I stayed had I enjoyed the privilege of resigning my position, as I have not the least ambition to remain in any position where the principles of honesty, straightforwardness, and truthfulness are not appreciated.

CHARLES F. BRAY,
Late Manager Great Southern Mysore Mine.
Cornwell-road, Ladywood, Birmingham, Jan. 30.

MINES ON THE GOLD COAST.

SIR,—Intending investors in the above mines should read a very able article by Mr. J. Skerchly, which appears in the Royal Geographical Journal, vol. 48. Mr. Skerchly visited the gold mines of Wassaw, on the African Gold Coast, in 1877 for his own satisfaction, and not as the agent of any particular company. While admitting the rich yield of gold in the quartz reefs, his general conclusions are not favourable to European mining. It appears that the mines are extensively worked by the natives on their own account; they sink numerous shafts 80 ft. deep on the quartz veins, the mineral extracted being pounded and washed by women. But when employed by Europeans nothing can exceed their mendacity, pilfering, and utter contempt for all bargains and contracts. As for carriage, a native will carry as much as 100 lbs. for a fellow native, but will only carry 20 or 30 lbs. for a European. Mr. Skerchly concludes by expressing his belief that these mines can never be worked profitably by companies using native labour, but that imported labour must be employed. He speaks also very strongly of the fearful effects of the unhealthy climate, and the obstacles created by native chiefs. The whole article is most interesting, and will well repay perusal.

THE CALLAO BIS GOLD MINING COMPANY.

SIR,—For some unaccountable reason no news has been received through the medium of the *Mining Journal* for the last two or three mails respecting the progress of the works of this company in Venezuela. The extracts from Mr. Downes' letters never have given much information, and that little seems now to be denied the shareholders. It is 18 months ago, or thereabouts, since Mr. Campbell Downes assumed the management, and surely, even allowing for the difficulties attending starting new mines, some tangible result ought to have been arrived at, especially after so large an amount of money has been spent; but from what I am informed I think there is little doubt that money is, and has been, spent in a way which is not altogether for the advantage of the Callao Bis Company. According to Mr. Downes' own reports, he has only sunk some 30 ft. on the Azales shaft during four months; and I wish to ask if it is not true that the ventilation of this mine at the bottom is so bad that the men after blasting have to wait an hour or two before going down again, and this at a depth of only 160 ft. from surface? Here is a property said to have produced quartz assaying 1600 ozs. of gold per ton, yet during 12 months not even a bar of gold has been sent home. With such quartz as this, or even with quartz a thousandth part as rich in other gold mining countries, the company would have been in receipt

of some hundreds of ounces of gold monthly. The machinery for extracting gold from mineral of this value need only have been for the time of the crudest description. It may be replied this is an out of the way place, but such is not the case, for the great Callao Mine is within a stone's throw of Mr. Downes' house, and adjoins the Callao Bis property. The town of Callao itself contains a population of some 3000 people, of which many are skilled artisans.

The Callao Bis Company hope to derive great benefit from the discovery of the Callao vein. This is supposed to be the secret of success. No vein has yet been discovered, although it has been found by the Callao people at a depth of 30 fms. a short distance north of this company's boundary. Mr. Downes has now a pump and hoisting machinery. I understand very little progress is being made in the main part of the shaft of this portion of the property. Ten months ago it was 120 ft. deep, and by last reports it was only a few feet deeper. Now, as regards the 20 stamps mill the greater portion of the machinery arrived at the mines the latter portion of August, and although I believe the different parts were duly prepared for immediate putting together Mr. Downes alters all, and lets a contract for \$10,000 to only erect, and it is not near completion yet. The mill has also been put up a mile from the Yuruari river, from which water will have to be pumped at an immense constant cost, besides which the company have nowhere to discharge their tailings except through a long tail-race, which will have to be constructed through the town of Callao.

Some enquiries ought to be made as to why the company's representatives have paid 12 cents per pound freight for their machinery from the Orinoco to the mines, when the usual charges for the same and supplies ranges from 5 to 7 cents per pound. I should have thought the 200 tons of Callao Bis machinery ought to have been carried at least at the minimum rate. The difference in this item alone means the sum of over 4000*l.* Some time ago it was stated Mr. Downes had 400 tons of quartz broken. Accepting this estimate as correct, will the whole of this pay to put through the mill, or even a quarter part of it? In conclusion, I should like to ask if it is not a rather dilatory and expensive mode of mining to produce in twelve months (say) 400 tons of mineral, at a cost of over 10,000*l.*

London, Feb. 2.

LA VERDAD.

OLATHE SILVER MINING COMPANY.

SIR,—I observe in last week's Journal another comment on the above company from the Leadville Mining Index. Since the telegrams received last August from "Ashton," who described the thousands of ozs. per ton on the property, and great excitement at Leadville in consequence. Nothing further has been heard about the mine except the firm of Lord and Co., of New York, are respectable, and that attacks on the property were through jealousy of disappointed speculators; also a book was issued entitled the Ouray Discovery and Mining Company, which I fail to see has anything to do with the Olathe. I admire the caution of J. Fitz Brind. Even if that gentleman has changed his mind since seeing the plans he cannot vouch for a single ounce of silver having ever been found on the property.

BITTEN.

PROFITABLE GOLD MINING IN AUSTRALIA.

SIR,—The late accounts of gold mining from Australia, whether in Victoria, New South Wales, Queensland, Tasmania, or New Zealand, are of a most encouraging nature, and tend to show the rapid progress the colonies are making in developing their resources, and the ample room there is for legitimate investment in gold mining with every prospect of profitable returns, and I can but think if capitalists and investors would but turn their attention to Australian gold mining investments they would be more certain of obtaining substantial results in the shape of good dividends than they are likely to get from other countries which appear to obtain their special favour. The colonies that have produced such an enormous amount of gold during the past 30 years, amounting to over 275,000,000*l.*, and the gold fields which are still producing such excellent results, are worthy of more serious attention than has hitherto been paid them. Month after month does the steady gold supply from Australia keep pouring into the English market, benefitting alike all sections of the community. The large alluvial gold field lately opened up and now being so profitably worked near Ballarat, as also the rich and extensive quartz reefs lately discovered on that celebrated gold field, has given a great impetus to the mining industry of Victoria, rivaling the most palmy days of the golden colony.

New South Wales is also emulating the enterprise displayed in gold mining by Victoria, and several of the new fields are being worked with much success, as also many of the older ones. It may not be uninteresting to many who are interested in gold mining to contrast the difference of efficient and successful management of gold mines in Australia with some of the bubble concerns that have absorbed so much capital in other countries, and which offer but little hope of success. The following is a list of some of the dividend paying gold mines in Victoria, which have paid upwards of 50,000*l.* in dividends, and are now in active operation, in most instances with many years of profitable work before them. The history of many of the old mines that have been worked out, and from which vast amounts of gold has been raised, would be a matter of interest if the statistics were at hand. Many millions have been paid in dividends from private mines, small co-operative parties of miners, as also of joint-stock companies, of which no record can be got, the bulk yields of gold being only accounted for in the general statistics. The Australasian Insurance and Banking Record, of Nov. 10, 1881, gives the following as a portion of a list of dividend paying mines in Victoria:—

Name of Company.	District.	Capital paid up.	Dividends paid.
Long Tunnel.....	Waihalia.....	£12,000	£786,000
Pleasant Creek Cross Reef.....	Stawell	21,250	780,742
Garden Gully United	Sandhurst..	21,614	680,949
New North Clunes	Clunes.....	37,008	487,734
*Band of Hope and Albion Consols.	Ballarat ..	449,000	413,631
Great Extended Hustlers	Sandhurst..	24,500	336,300
†Egerton	Egerton	93,750	219,680
Great Extended Hustlers, No. 1	Sandhurst..	4,200	194,600
Tribute.....			
Queen's Birthday.....	Dunolly	6,750	186,750
United Hustlers and Redan	Sandhurst..	4,800	109,200
Extended Cross Reef	Stawell	37,399	95,083
Clunes	Clunes.....	30,000	106,434
Johnson's Reef.....	Sandhurst..	69,300	130,199
Lazarus No. 1	Sandhurst..	48,375	75,375
New Chum Consolidated	Sandhurst..	14,000	71,400
South Clunes.....	Clunes.....	40,000	71,000
Ellesmere	Sandhurst..	17,616	73,850
North Old Chum	Sandhurst..	16,200	68,175
North Johnson's	Sandhurst..	825	64,425
Old Chum	Sandhurst..	10,800	59,062
Lazarus Company	Sandhurst..	47,250	51,750
Ellenboro	Sandhurst..	15,300	51,300
Black Horse	Egerton	12,750	62,250

* Band of Hope and Albion Consols in their amalgamated alluvial claims on the same capital as mentioned above paid in dividends 913,530*l.* 10*s.*

† The mine now known as the Egerton had been successfully worked by various parties since 1855, and large yields of gold produced therefrom. A few years since, the mine was held by a private owner, who sold it to the present company for about 15,000*l.*, including the plant and machinery, and the dividends paid of 219,680*l.* are really the profits on that purchase.

There are many other companies not mentioned, such as the Port Phillip and Clunes Companies, which have raised gold from their mines to the value of 1,625,529*l.*, and paid in dividends and royalty 366,166*l.*, as mentioned in the reports ending June 30, 1879.

The foregoing list of some of the profitable gold mines now in active operation in Victoria is only a small proportion of the number of first-class dividend paying mines now in work, as within the last two years a large number of new mines have been added to the list, some of which have paid enormous profits on the capital invested. In several of the companies above named the nominal capital quoted is much beyond the amounts expended in the mines, the nominal capital having been fixed on registration of the companies based on to the market value of the shares at the time the companies were registered under the Limited Liability Acts. This small list of profit-

able gold mines will show that gold mining when conducted under economical and skillful management, and sound judgment exercised in the selection of mines, is often attended with satisfactory results. The late returns from the gold fields in the several Australian colonies fully justify the investment of capital in legitimate mining properties from that part of the world. THOMAS CORNISH, M.E., Author of "Gold Mining, its results and its requirements," 81, Fenchurch-street, Feb. 2.

MINING IN CORSICA.

SIR,—A friend of mine who is at present in Corsica, and who has visited the Olmeta and Lama Mines for the second time, writes as follows, under date Jan. 30:—"The opinion I sent you some years ago about them I have more reason than ever to think was a correct one. I said I believed Olmeta would first be in a position to pay its way, but that Lama would eventually be the most profitable. Now, there is no doubt that Olmeta could have paid its way for several years past if it had been worked and the mineral treated in Corsica; and I am sure no copper mine in Corsica that has hitherto been worked has promised so much as Cuscicello (Lama) now does at the same stage. The three lodes that are being worked are strong and regular, and when you remember the greatest depth is as yet only about 12 fms. you must admit they are not at a depth where no further improvement is to be expected. During the last 18 months the work that has been done is upon a carefully planned and reasonable system, and the result is that the existence of a good mine is now really established. Copper is I see 10¢ per ton better than when I last saw the mines." A SHAREHOLDER.

CHILE GOLD MINE.

SIR,—If your correspondent "One From Venezuela," who mentions the Chile Mine while on the subject of the Nouveau Monde, could say a word in favour of the present prospects of the Chile Gold Mine he would confer a favour on those who are unaware of the reasons why the mine is quoted 50 per cent. discount before even the manager has entered on his duties. AN ORIGINAL SHAREHOLDER.

HOOVER HILL MINING COMPANY.

SIR,—It is not at all surprising that your correspondents "A dissatisfied Shareholder" and "Aurum" have at last given expression to the "muttered" growls, "not loud but deep," of the long suffering Hoover Hill proprietors. Being in the habit of retaining prospectuses, reports, and other documents connected with companies in which I have an interest, I have since the appearance of "Aurum's" letter looked through all those relating to this company, and with your permission I desire to call the attention of any brother shareholders through the Journal to a few matters which strike me as interesting, to say the least:—

1.—"In October last," says the prospectus, "Mr. Josiah Remfry, a mining engineer who has had great experience in gold mining, was sent out to make an independent inspection of the property." It is to be observed here that the prospectus does not say by whom, on whose behalf, or at whose request Mr. Remfry was sent out, thus leaving it in doubt whether he was sent out by the vendors or by someone else connected with the launching of the company. Nor was this point mooted, still less cleared up, at the statutory general meeting held on May 10 last, at which the Chairman said:—"The company was registered on Jan. 15, 1881. It will be within your knowledge that previous to that date Mr. Remfry, a mining engineer of considerable experience, had paid a visit to the mines and had made a report on the property."

2.—On March 25, 1881, Mr. Remfry reports:—"I have found out that Briol's shaft proper stands a few yards back of Briol's open-cast, from which the samples (2 those mentioned in the prospectus) were taken, and that this pit is 140 ft. deep, with ore at the bottom far richer than any of the places we have tested. I should like to get at this." So would the shareholders say I.

3.—"With all these men," writes Mr. Remfry same date, "breaking away good ore three months in advance of the mill, I think we shall manage to keep well ahead of the stamps." They certainly have been entirely successful in this!

4.—On April 2, 1881, Mr. Remfry reports:—"At little expense I can run in an open cutting from the side of the hill close to Briol's . . . carrying with me the entire width of the quartzite, 30 to 40 ft. in width, and 20 ft. high. All this stuff appears to pan very well. This quarry alone would keep a brave lot of stamps going." So I should think, and I imagine my brother shareholders think so too.

5.—On April 27, 1881, Mr. Remfry reports:—"I mentioned in my last of the 19th inst. that we had drained the Provost and Gallimore shafts. This has been much more quickly realised than I expected. I have been down them, and once more reassured myself of the existence of this big quartzite dyke. In no one place has this dyke been pierced through, but it is opened out over 25 ft. wide in one of the pits. I have again broken from this mass, hard as flint, pieces from all parts, which after bruising down and panning show a gold yield equal to the assays made from these places." As to which see prospectus.

6.—On June 6, 1881, Mr. Remfry reports:—"I have been assaying in the last two days ore broken from the present workings, and from surface in many places. The lowest assay was \$18 per ton from surface up to \$155 taken from the present end in Gallimore. It will, indeed, be an extraordinary thing if we obtain good results in panning and assaying and not in the mill; but I feel satisfied that we shall have good results." Compare this with what Mr. Remfry writes on September 3, 1881, after the commencement of actual crushing:—"One point is fully demonstrated, that our sulphurets hold a large yield of gold, which, as I expected, our free milling process does not touch, and which will have to be extracted by some other process, or concentrated and shipped."

7.—On September 14, 1881, Mr. Remfry reports:—"Mr. Sawyer, the assayer, has arrived and is at work . . . We are going through a systematic series of assays from the mine downwards . . . As I have said, with the assistance of Mr. Sawyer, I am carefully completing a series of assays, which I hope shortly to forward." And of which nothing has since been heard by the general body of the shareholders!

8.—On October 5, 1881, Mr. Remfry reports:—"All our sulphurets are being caught for future treatment. I am preparing a parcel to send to New Jersey as an experiment." And of which nothing has since been heard by the general body of the shareholders!

9.—On October 24, 1881, Mr. Remfry writes:—"The value of these sulphurets and sand was ascertained by assay, and their value added to the free gold obtained. I am making a few test experiments, and will soon be able to give you the results obtained." And of which nothing has since been heard by the general body of the shareholders!

10.—Mr. Remfry's report on November 15, 1881, on the grand discovery in Gallimore is too long to quote, but it is significant to note that in re-publishing his statements the New York Mining Record (December 24, 1881) remarks:—"We apprehend that there is great exaggeration in these reports."

11.—I strongly advise shareholders to read page 448 New York Mining Record, November 5, 1881, if they have not already done so.

12.—On December 14, 1881, Mr. Remfry writes:—"A box of Gallimore ore weighing 500 lbs. was dispatched from here yesterday, care of Messrs. Godwin and Sons, shipping agents, New York, to be forwarded to you." Again January 15, 1882, Mr. Remfry writes:—"A barrel of sulphurets was sent on to Godwin and Sons for shipment some time back." "Some time back" of course means December 13, 1881; but apparently Mr. Remfry did not care to take the trouble of looking back to ascertain the exact date!

13.—On January 15, 1882, Mr. Remfry also reports:—"I am now running through the mill the ore broken and obtained from driving Briol's shallow tunnel; a careful report of results obtained shall in due course be sent forward." It is much to be hoped that this "careful report" will see the light, which has not been the case with the "careful reports" on certain other matters!

I could go on longer, but I think that I have written enough to induce the shareholders to take a more active interest in future in their property than they have hitherto done.

But I beg to ask:—

1.—On whose behalf did Mr. Remfry make the visit to the property which resulted in his report dated November 15, 1881?

2.—Why were not active steps taken long since to obtain accurate information on the various matters mentioned in this letter?

3.—There has been plenty of water at the mine since November 1, 1881. Why then were not active steps taken long since to compel the resident engineer to properly and continuously work the stamps in order to ascertain whether the shareholders are really likely to get anything out of the property?

I should add that on the 24th ultimo I was told at the office that the directors had decided to make a change in the management.

But is this enough? For my own part, considering the allegations quoted in the New York paper of Dec. 24, 1881, mentioned above, I am strongly of opinion that it would be advisable, if not actually necessary, to send out our most practical director (or some considerable shareholder of undoubted standing with mining experience), accompanied by a mining engineer, to report to the shareholders as to the real value of their property. BASIL PORTER.

Whitehall Yard, S.W., Feb. 1.

EUREKA (NEVADA) MINING DISTRICT.

SIR,—I have the pleasure to hand you my usual budget of news received from this mining centre:—

More assessment work has been done in this district this year than ever before. This indicates that old mining claims are now worth something.

After the snowstorm yesterday the graders on the E. and C. River Railroad were still at work.

Thirty-two mining claims have been recorded at the Recorder's Office since Monday morning.

The miners propose calling a meeting to request Recorder Mollinelli to reduce the fees for recording mining claims.

At present there are but four furnaces running in Eureka, three at the Richmond and one at the Eureka Consolidated. It is currently reported here that there is now more in sight in the Eureka Tunnel than ever before. Another magnificent specimen from the Eureka Tunnel was brought down to the company's office on Sunday evening by the assayer, who stated that that kind of rock would assay about \$1000 to the ton. It was taken from a drift run from the 50 ft. winze station. It shows black metal and yellow chlorides in abundance. As far as explored by the drifts the ore body is growing stronger, and every day adds to the value of the mine. Slight trouble is being experienced at the bottom of the winze from impure air, a depth of 80 ft. having been reached on the incline in solid ore. Air-pipes have been ordered, and will be placed in the tunnel as they arrive. This will necessitate a furnace, for which the brick &c., have already been purchased. The north drift of the Tunnel is also showing exceedingly well, and the bonanza in that direction is confidently expected to be developed in a short time. The ore so far encountered in this drift shows strong in gold. There are now 20 men employed in and about the Tunnel, and this force will be doubled when the air-pipes are laid.

The richest ore yet encountered in the Eureka Tunnel, according to the official report of Maurice Hartnett, the foreman, was struck on Thursday night in the south drift from the 50 ft. winze station. The drift has been passing through richer ore for several days, and has now entered a formation of quartz which excels anything yet found in the mine. It is strong and solid, and pitches to the south-west in the heart of the mountain. Another drift is being run north from the same station, but this displays a different character of ore, not so rich, and mixed with limestone. Work is continued in both of the drifts day and night, and every effort is being made to explore the ore body as speedily as possible. Other points in the Tunnel are exhibiting interesting features. The two north drifts from the 500 and 900 lines are actively pursued ahead. The air is pure, and the temperature pleasant. The drift from the 900 point is in 40 ft. and has encountered in an upraise, during the present week, a narrow vein of ore considered low grade, but which occasionally gives very rich assays in gold. Car-tracks have been laid to the mouth of the upraise, which greatly facilitates the work. The drift from near the 800 point is in about 70 feet. It has followed the 4 ft. streak of galena ore recently struck some 80 ft., but so far it has not improved either in richness or extent. A number of small veins have been traced from near the present face of the drift in different directions, but they have developed nothing. Mr. Hartnett, however, is sanguine that a parent body is somewhere in the vicinity, as the veins are all strong and easily followed. The air-pipe to the south winze will be laid by the beginning of next week, when more active operations will be commenced. A car-load of rich ore, comprising about 15 tons, assaying 170 ozs. to the ton, is now at the depot awaiting shipment to Salt Lake.

The Eureka Tunnel Company began to ship ore to Salt Lake yesterday, Charley Brov's train bringing down the first load to the E. and O. depot.

Mr. R. Zeile, assistant superintendent, and W. J. Stephens, foreman of the Eureka Consolidated Reduction Works, went to the Eureka Tunnel yesterday, to examine the ore with a view to taking a contract to reduce it at the works where they are engaged. From the first and second class dumps each they took away a number of samples from which assays were made by Mr. David Landon, as follows:—First grade, \$207.55; and the second grade, \$80.90 per ton. The chief purpose of their visit was to determine the per cent. of lead carried by the Tunnel ores, with which they were satisfied upon investigation; so that it is now fixed that these ores will not be shipped away to Salt Lake, but be reduced in Eureka.

Several days ago Mr. O. J. Salisbury and Mr. Dick Berryman visited the Eureka Tunnel, and took away three samples of ore, which they tested over at the Geddes and Bertrand. The specimens were \$3500, \$3400, and \$3253. The silver buttons to which the 3 ozs. were reduced, about the weight of a 10 cent piece, are refreshing to the eye of the miner for themselves, for the satisfactory showing that they indicate. They were presented by Messrs. Salisbury and Berryman to Mr. E. J. Butler, secretary of the Tunnel Company, by whom they are held as pets.

Prof. Joseph Grandemeyer visited the Eureka Tunnel yesterday. He says that the people of the district have no adequate conception of the grandeur of the enterprise and the magnitude of the developments which are in prospect. The Professor is familiar with all the formations that are characteristic of this district, and his metallurgical experience otherwise is very extensive, so that his opinion is valuable.

The profits of the Richmond Mining Company during the past six months, after paying all expenses, have been over a quarter of million dollars.

Ore was struck in the main shaft of the Ruby and Dunderberg, which is now down a depth of nearly 300 ft., and they are still sinking.

Since the resumption of work on the Bowman Mine property no time has been lost. About 40 tons of ore are being extracted and shipped to the furnaces every month that average over \$100 per ton. Seventeen men are employed in the mine and above ground, and the mine is paying expenses. Mr. H. Joseph, who was through the Bowman Mine yesterday, says there is a splendid prospect developed on the 113 ft. level. The vein is striking north-west and dipping northeast. The ore carries three-fourths of its metallic value in gold.

A Shoo Fly ore drift, 112 ft. from the surface, is in a formation between quartzite and shale that resembles low grade ore, and a bonanza is looked for daily. The north-west drift shows greater width of formation between the walls than was expected.

A piece of galena ore carrying considerable "black metal," taken from the Queen Mine, Silverado District, was brought in yesterday, which is said to assay \$2500 per ton. This mine has been a good paying property, the owners of it having been able to erect out of the proceeds of their work steam hoisting works. Developments are going on all the time, which the mine pays for, and more. The main shaft is of size 6 ft. by 8 ft., and is down 215 feet. A drift is run off northerly from the shaft, from which a winze has been sunk 25 ft. on a vein of ore 2 ft. thick, that runs clean across the shaft. This ore will work an average of \$300 per ton, and the vein shows signs of permanence. About two years ago considerable ore was struck in this mine at a depth of 160 ft. from the surface, and was followed by an incline, in which it seemed to finish. The discovery of a paying vein of ore at the present depth is hailed as a sign of a permanent paying property. The Queen Mine has already produced over \$100,000, and regular shipments to the Eureka furnace are again being inaugurated. The Queen is one of the many properties in this section that shows that mining pays—at least in Eastern Nevada.

The Silver King shaft is now down 180 fms. in paying quartz of an average value of \$40 per ton. A drift 20 ft. from the bottom running north is also all in quartz of the same quality. The main shaft of the California is down 195 ft. with drifts running off in different directions, aggregating 600 ft., with a large amount of ore of different grades showing up in all parts of the mine. It is thought that group of mines embracing the Connolly, California, Silver King, Golden Rule series, and Ruby and Dunderberg will equal Ruby Hill, all being on the same belt of limestone.

At Silver Connor at the 800 level, in the south drift, a body of ore has been broken into that assays \$72 in silver and \$75 in gold carbonate. Another streak of ore, apart from it about 15 ft., assays \$160 in gold and \$125 in silver quartz. As depth is attained in this mine the ore increases in size and quality.

Col. Monroe has received information by letter that a company has been organized and incorporated in Buffalo, New York, to work the Columbia Mine, located on the south side of Prospect Mountain. A cheque for \$5000, accompanied the letter, as a starter and sign of good faith on the part of the incorporators. The capital stock of the company is \$300,000, all subscribed, of which \$50,000 is set aside for developing the mine. None of the stock is for sale. Wm. Hengener is president, and Geo. F. Wright secretary and treasurer. Colonel Monroe is to be congratulated upon his success, and it is to be hoped he will show up a bonanza for his Eastern friends. The mine is situated in a good locality, and intelligent efforts will soon show the stockholders that their money has not been spent in vain.

A good deal has been said about the extent of the Geddes and Bertrand Works; still it will be a surprise to many to be told that they cover more ground than any other reduction works on the Pacific Coast. This statement is made without qualification. The area included—the engine apart—is 230 by 183 ft. From the comb of the roof to the lowest level (the interior is arranged in terraces) is 136 feet. It is all, fortunately, under cover, it having required 320,000 shingles to complete the covering. This company have on the premises 25,000 bricks for early use in the construction of chimneys and furnaces. They have 500 tons of salt on hand, and upwards of 10,000 cords of malaga wood ready for use when work begins. Yesterday the two boilers for the engine (150-horse power) were being put in position. The machinery, manufactured mostly in San Francisco, is due here on contract the first week in February. By the first week in March the works will be started up. Only eight men will be employed on a shift, including engineer and everybody else. This may appear singular; but it is accounted for by the fact that very little will be done by manual labour, the machinery being so constructed as to be to the greatest extent automatic. A tunnel 5 ft. by 6 ft. has been started from the level of the ore line to the mine, to strike at a distance of 110 and 1200 ft. on the 250 ft. level, though it is not calculated to use the tunnel for a year, as all the ore needed for the present is in sight above the 150 level. Mr. Gilmer's visit now is to determine the expediency of pushing on work on the tunnel. The quantity of ore in sight is estimated by

Dick Berryman, formerly foreman of the mine, at \$500,000 worth, the ore averaging between \$30 and \$40 per ton. The furnaces will work 50 tons per day of 24 hours; but have a capacity—if other furnaces be put in, for which place is reserved—of reducing 100 tons in the same time. These facts speak for themselves.

At El Dorado and Grindstone Mine the new whim and shaft-house are finished, all but hanging the doors. The collar of the shaft is finished, and the shaft is ready for cribbing. Everything is in readiness for the patent iron whim, which was delivered on the ground yesterday, and will be set in place immediately.

Superintendent Reed, of the Eureka Consolidated, writes to the San Francisco office as follows:—"No special change in the affairs of the mine this week. The 10th level drift still continues in favourable ground. Have finished putting the iron on the Locan shaft building, and the gallow frame is about completed. The furnace is running, and producing as usual."

Eureka Tunnel shares almost doubled in price yesterday. The bedrock price of this stock should be \$5. It is worth every cent of it.

Mr. Maurice Hartnett has resigned the position of foreman in the Eureka Tunnel, and Mr. F. J. Mette has been appointed in his place. Mr. Hartnett had charge of the work in the Tunnel since it was first started; but has a number of mining properties which need his immediate attention, hence his resignation. Mr. Mette has been one of the shift bosses at the Eureka Consolidated Mine for several years, is a first-class mining man, and will hereafter give his undivided attention to the Tunnel.

A rich strike of ore was made in the Republic Mine yesterday. This property is principally owned by Maurice Hartnett, and is located on the summit of Prospect Mountain. Maurice Hartnett resumes work on the Industry Mine today with a force of three men.

Lawrence Hartnett is superintending the putting up of the machinery in the Geddes and Bertrand Works.

The Albion is working in the neighbourhood of 30 men.

Nine contracts, employing 36 men, were let at the Richmond on Tuesday last. The Geddes and Bertrand Reduction Works will be lighted by electricity.

Morris H. Joseph has sold his one-third interest in the El Dorado No. 2 Mine to Gen. P. E. Connor for \$12,500. Col. E. N. Robinson, with the exception of the property involved in the sale, owns all of the El Dorado claim south of the Tunnel up to 200 ft. from the Tunnel line.

London, Feb. 3.

RUBY HILL.

LEAD REPORT.

SIR,—Since our last lead has followed all other metals, and we have had a small fall in price of 5s. a ton, and at this figure considerable quantities have changed hands. The sales reported at 400 tons rich lead at 147. 17s. 6d.; 200 tons under 70 ozs., 147. 15s.; 100 tons English lead, 142. 12s. 6d. The market remains very flat and falling, and to effect sales lower prices will have to be taken, although the manufacturers are well sold and have plenty of orders for white lead, but pipe and sheet orders are very scarce.

STOCKS.

ARIZONA, AND ITS MINERAL RESOURCES.

SIR,—To Arizona belongs the honour of producing the largest nugget of silver (native) ever found—2700 lbs. This mass of pure metal was confiscated by Philip V., and taken to Madrid. Pure native silver, chlorides, ruby silver, bromides, silver glance, sulphides, carbonates, and sulphurets are the most generally distributed of the silver ores; but there are many other varieties peculiar to the territory. Ores which assay into thousands of dollars are of common occurrence, and create no comment. Large quantities of ore going from 1000¢ to 2000¢ per ton have been shipped from the territory, and several mines are steadily producing rock that will go from 3000¢ to 4000¢ per ton. Probably no portion of the mining domain possesses so many natural advantages for the successful working of ores. The climate, too, cannot be excelled, and work is carried on all the year round. The country is now rapidly being opened up by railways, so that the production of minerals will greatly increase. All the ten counties into which Arizona is divided are rich in minerals. Let us take, for example, Cochise county, in the extreme south-eastern corner of the territory. In 1877 Mr. Sheffield, an indomitable prospector, was at Camp Huachuca, and discovered the Lucky Cuss, Tough Nut, and other mines which have since attained a national reputation. The bullion produce of 12 mines in Arizona for nine months ending Sept. 30, 1881, was close upon 1,400,000¢. The mineral belt of Tombstone extends nearly eight miles east and west, and about five miles north and south. The mines of Tombstone are situated in a country which may be described as rolling hills, having a gradual ascent until they merge into the Mule Mountains. Porphyry appears to be the predominating rock, though a capping of limestone overlies the leading mines of the district. A notable feature is the size of the lodes and the ease with which the ore is reduced. The present output of bullion from the Tombstone Mines is over 100,000¢ per month from 140 stamps; the yield is being steadily increased, and valuable paying properties are being added to the list of bullion producers every month. It is estimated that the bullion yield from the Tombstone Mines alone this year will amount to 1,300,000¢. This is a good showing for a mining district a little over three years old, which did not drop a stamp until June, 1879.

How will Cornish and Devon mines compare with this, or even Indian gold mines? On the Tough Nut Mine, already referred to, immense bodies of ore are met with sometimes 20 ft. in width; the ore is found in spar and quartz, and is said to average 20¢ per ton. This mine has paid dividends from the commencement, and has a large surplus in hand; there are about 125 men employed. The Great Central Company have a splendid mine; the lode is from 6 to 12 ft. wide, and worth from 16¢ to 20¢ per ton. The main shaft is down 83 fms., with three levels. The reduction works consist of 30 stamps, constantly at work, and having been in operation only a few months, it is estimated that 100,000¢ has already been produced, regular dividends are declared, and the property is steadily increasing in value as depth is reached. The Girard, Head Centre, Empire, and others of the group of mines in this district are all doing well, and developing into fine paying properties. In this necessarily brief resume full justice cannot be done to the immense silver lodes of Tombstone district. To have a proper conception of the size, richness, and extent of the lodes a personal examination is necessary. It is safe to say that nowhere on the coast have there been found ore bodies larger, richer, or more extensive. There are hundreds of fine prospects yet undeveloped which give every indication of being valuable, and which offer admirable opportunities for investment.

California district, in Cochise county, is situated in the Chiricahua Mountains, 20 miles south of the Southern Pacific Railroad. Many rich and valuable mines have been discovered here. Tin ores are generally smelting, carrying much horn silver, and the lodes are large and well defined. The Texas, the first and principal mine discovered, contains a large lode from 4 to 30 ft. wide; the ore is galena and chlorides, and averages about 8¢ per ton; large bodies of ore are exposed; a 30-ton smelter has been erected. The Texas Milling and Mining Company are the owners, who have ten other mines in the district. The Mono Mine, in the Turquoise district, 18 miles from Tombstone, shows fine ore in every level. The Defiant Mine, owned by New York capitalists, has a fine lode of carbonate ore, which will average about 16¢ per ton; this lode is from 2 to 20 ft. wide; there are several hundred tons of ore at grass. With its favourable surroundings and fine ore bodies Turquoise is destined to become an important mining district.

The great silver belt of Arizona, as far as yet developed, commences about 40 miles south of the bend of Colorado river, in the north-eastern part of the territory, and extends in a line varying in width from 40 to 80 miles south-easterly to the Gila river, and thence southerly to the Mexican line. Leaving, then, Cochise county, which as I have stated, is in the extreme south-eastern part of the territory, I will now draw your attention to Mohave county, at almost the extreme opposite side of Arizona, in the valley of the Colorado. Almost every mountain range within the borders of this county is seamed with rich veins of gold, silver, and copper. The distance from supplies, cost of freight, and the want of proper reduction works have hitherto prevented the development of Mohave's mineral wealth. The Atlantic and Pacific Railroad are long well pass through the centre of the region, and a bright future is in store for it. The silver ores here are mostly sulphurets, carrying native silver, ruby silver, silver glance, and other rich combinations. The lodes have generally well-defined walls; water and wood are abundant. The lack of reduction works necessitated the shipping of the ores to San Francisco at a heavy cost. Ores that were not worth 100¢ per ton left no profit to the owner. The great riches of the mines of this county has been conclusively proved, and all that is wanted to cause it to become a large bullion producer is cheap transportation, which is not far off. Very little mining was done in this county before 1871, but now there are dozens of mines nearly all doing well. The Lone Star, in the Halapal district, is 83 fms. deep, with 50 fms. of levels driven; the lode is worth 30¢ per ton for silver, which is a sulphuret carrying

base metal. The mine has produced 12,000 tons of metal, and the Connor has a 3 ft. shaft sunk 16 fms. carries both gold and silver, has produced 4000 lb. The Donohue, Rogers, Oro Plata, and many others are fine properties in an incipient state of prosperity. *Camelford, Jan. 31.* W. DIXON KING.

LEAD MINING IN BRITISH BURMAH.

SIR.—I have just acquired extensive mining privileges from Government over a tract of land containing vast lead deposits in British Burmah. The surface ores assayed by Messrs. Johnson and Matthey gave 74.60 per cent. of lead and 13 ozs. of silver, and I have abundance of water carriage, splendid timber, moderate labour, and a good market. I have until December to prospect seven square miles, then I am to select four square miles and keep them for ten years free, and after that twenty years, on paying royalty 20% per year per square mile. This will be the first enterprise of the kind in British Burmah. The Tenasserim division in which the mine is situated is known to abound in mineral deposits, and has never been explored yet. The price of lead is high in Burmah and India, and the Government, who desire to encourage local industries, will no doubt also become a purchaser.

The late Mr. Mark Fryar, an old correspondent of the *Mining Journal*, was, as Government Geologist and Mining Engineer, attracted by the native statements, visited the mines and reported on them to the effect that if Government could not induce private individuals to work them, Government should themselves set an example of mining enterprise. A few references to Mr. Mark Fryar's reports, published in the official British Burmah Gazette, although they were made ten years ago, will not be uninteresting. He states that "the most important step which can be taken by Government towards developing the mineral resources of Tenasserim is I believe that of inducing men of enterprise and means from home to take leases or licenses for mining and metallurgical works, and it is in connection with this that I particularly wish to point out that so far as I can now see there is no room for apprehending any serious loss to the Government from granting favourable terms to suitable persons who may wish to become lessees. The indirect benefits to Government by way of increasing the population of the country, increasing the acreage area under cultivation and increasing trade and prosperity of every kind, will no doubt in the end far exceed any benefit directly derived from mining leases, and on the other hand any one commencing mining and metallurgical works in the country on a large scale would not be able to avoid some serious expenditure of money before their agents and works could become so established as to secure profitable returns. At the same time it must be stated that a judicious organization of labour and plant, and a skilful application of machinery, cannot fail to secure most successful results in dealing with the minerals of the country."

"Great inducements in all respects should (he remarks in another place) most certainly be held out to good men who become pioneers of European workers and lessees in the minerals of Tenasserim." And with regard to the lead ore at Tee-taw-lay Hill he says—"The river Yoonzaleen is a branch or large tributary of the Salween. Myeendoung creek is from 25 to 30 miles by river up the Yoonzaleen from Kakaureit and from Kracabah village on this creek in a north-westerly direction one comes to the Tee-taw-lay Hills. By this route the distance from the river to the lead vein must be 30 miles, but I believe a much nearer road may be found from some point higher up the Yoonzaleen than where I was advised to start from." With reference to this observation, I may state that Kaydinete is the proper place to start from, and is not more than 8 or 10 miles from the Tee-taw-lay Hills. From an examination made of this ore at the Geological Survey Laboratory in Calcutta it is said to contain only slight traces of silver, but to be quite free from an association with other metals. The lead vein seems to dip at an angle of 60° from the horizon in a south-west direction, and to extend longitudinally in a north-west and south-east direction.

The vein had nowhere been so exposed, Mr. Fryar adds, by excavations as to enable me to form a correct estimate of its thickness or productiveness, but from what I was able to see first of the disposition of the ore in the matrix, and second of the matrix itself—easily worked limestone and beautifully crystallised carbonate of lime. I believe that this is certain to be a highly productive and easily worked vein of lead ore. Indeed this is the best place for lead mining that I have yet seen in Tenasserim. I have said that the place where the vein has been discovered on the hill is about 300 ft. above the general level of this country. From this it follows that mining could not be pursued to nearly this depth without necessity for pumping or other kinds of machinery, seeing that there is this depth available for adit levels. I do not believe that the Burmese who were at work on the Tee-taw-lay lead vein when I examined the place for minerals are likely to succeed in obtaining profitable results. The vein is in my opinion a valuable one, and may be profitably mined, but in this instance, as in most others of the kind, there is required an expenditure of capital in preparatory works before profits can be realised. I have not sufficient data from which to form even approximately an estimate of what capital would be required for a mine and smelting at this place, but by taking a general view of the matter, and from the experience I have had of mining work with the natives of India, I should say that a lakh of rupees (10,000 £) would be sufficient. *W. O. L. Riermead, Feb. 1.*

GOLD IN WALES.—No. XXXVIII.

SIR.—Allow me to record in the Journal results of working auriferous and argentiferous copper and arsenical iron pyrites at the Glasdir Mine, Merionethshire. After a suspension by the former proprietors of eight years, in the month of May last I began to direct the clearance of this mine, the reparation of machinery, and the erection of 30 "Britten-Readwin amalgamating pans." The intention at the outset was to utilise everything possible of the existing apparatus, some of which obviously was not of the most modern or approved description. However, in October last the ore raising and dressing in a manner began, and up to the 31st ult. upwards of 3000 tons of cupriferous and pyritous Silurian rock had been systematically broken down, about one-half of which is stored in the mine works alongside the tramway, on a level with the crushing mill, and the balance of 1500 tons has been treated mainly for copper ore, with the exception of 20 tons, which have been treated by my new method for gold, or rather electrum—that is an alloy of gold, silver, &c. The operation has resulted in the sale to Messrs. Vivian, at Swansea, of 86 tons, of the value of 400 £, some of the copper ore realising 6 £. 16s. the ton of 20 cwt., and 60 tons on its way to Swansea: total, about 150 tons.

In order to test the rock and the apparatus fully and fairly within the last fortnight (with the "old Blake," out of order) I had 121 wagons of the mineral, taken through and through, trammed out of the mine to the mill, and 90 wagons of it (135 tons) passed through the "Blake" in 23 consecutive hours, or thereabouts, and carefully dressed. The results were 16 tons of yellow copper ore, worth about 90 £, produced at a working cost of 12 £. 8s., or (say) 1s. 10d. per ton.

To test the mineral practically for gold, &c., a 5-ton parcel was taken from the 121 wagons of the lowest grade rock, and submitted to my method of amalgamation, and yielded over 2 dwts. of electrum to the ton, saving all the contained copper ore, &c., simultaneously in a marketable condition. To test the auriferous value of the rock in mass further, a parcel of 15 tons was taken, containing a conspicuous proportion of arsenical pyrites (mispickel). This was submitted to similar treatment, and the electrum obtained was over 2 dwts. to the ton. In this case also the pyritous matter was obtained in a marketable state.

During these several trials of 5 and 15 tons no appreciable quantity of mercury escaped with the tailings, and the apparatus worked with almost the regularity of clockwork.

Supposing the amalgamating apparatus to have been on a scale large enough to do the same amount of work in the 23 hours, and taking the lowest estimate, 2 dwts. of gold to the ton, the result would have been 134 ozs. of electrum, worth 63s. the ounce, or 22 £. 10s. 6d., and 16 tons of yellow copper ore, worth (say) 90 £; the labour cost of which equalling only 7 £. 18s., or (say) 15d. the ton. Had the rollers been out of repair the 135 tons operated on would

have reached 160 tons, without any additional labour cost. The mine is now capable of producing twice or thrice the quantity that can be disposed of by the existing machinery, costing on an average 2s. 3d. the ton for raising.—*London, Feb. 1.* T. A. READWIN.

CORNISH MINES—TRUE CASH STATEMENTS

SIR.—Can you inform me and your numerous readers and investors in Cornish mines why most of the pursers, managers and agents, and committees, refuse or neglect to produce a true statement of accounts—a cash account made close up to the day of the shareholders' meetings? A statement that all merchants' and other accounts for goods received on the mines are so closely charged up in the accounts submitted to the meetings. Why do not bankers, merchants, and others (being shareholders and attending the meetings) see that this is done? Why do bankers themselves allow the mine accounts to be overdrawn, which, as they well know, is totally at variance with the true Cost-book System? Is the bankers' book of each Cost-book System mine produced at each mine meeting; if not, why not? Remembering the West Basset bankers' book affair some years ago, shareholders in mines should remember this as being an important matter. Is it not, may I ask, time that a higher standard of Cornish mine management should be adopted, as so ably advocated by you in the *Mining Journal* and the Cornish West Briton newspaper? *PRO BONO PUBLICO.*

SOUTH DOLCOATH MINE.

SIR.—For the benefit of the mining community I send you a few remarks on this mine and its immediate surroundings. The property is situated in the well known and justly celebrated district, of which the Carn Brea Hill may be taken as the centre, and around this hill are situated the mines that have won for Cornwall a name that has no parallel. In support of this statement it need only be said that four mines alone—Cook's Kitchen, Carn Brea, East Pool, and Dolcoath—have in the last three years increased in market value no less than 665,000 £. Capt. Teague might, therefore, feel himself very safe in intimating to his friends at Carn Brea Mine meeting a short time since they need not go away from Carn Brea Hill to find a place to invest their money; but notwithstanding such sound advice it is a little remarkable how few, comparatively speaking, of the outside public avail themselves of the opportunities offered to join local people in developing mines where success is as certain as any mining can be expected to be. But let a flaming prospectus be issued promising what no man in his right senses would expect, it is then the public rush headlong into worthless concerns, and to quickly find they have lost their money; hence they turn around and abuse mining, and blame everybody but themselves, where they, and they alone, are only to be blamed, for the simple reason that they will not follow the advice that has so often been given—join with local people in developing districts that are known to be productive. This advice is equally applicable to those who go in for an investment or a rise in market value. As an illustration, it may be stated that South Frances is now more than double the value it was three years ago. In a like period West Basset has increased in market value just exactly fivefold, and the shares in South Dolcoath (this mine is contiguous to West Basset) have risen in value nearly 50 per cent. in the last three months, and judging from the fine samples of ore now being brought to surface a much greater rise in the price of shares may be expected in a very short time. Investors, therefore, may do well to take advantage of the temporary lull in the market, and supply themselves with good stock. *CARN BREA. Redwin, Jan. 31.*

SOUTH DEVON UNITED COPPER MINES.

SIR.—Since my letter of last week the board have issued their notice of the general meeting, with reports on these mines by Capt. Richards and Capt. Clemo, of Devon Great Consols. I do not think that anyone can complain of what, under the circumstances, they have stated. They could not be expected to give any very decided opinion of the value of a lode buried under 30 fms. of muddy water, and this is the nearest point of approach to it. But what strikes one as strange is that two inspecting agents should be called upon to report upon what, to most shareholders, would be chiefly interesting, but which was 30 fms. under water—the bottom of the mine. They saw the levels east of Brook engine-shaft down to the 110, but nothing below, the mines being full of water below the 110. They saw, however, that there had been a productive lode for the great length of 300 fms.; and if they had been afforded the opportunity of examining the point of the commencement of the unproductive ground, and then could have referred to a plan upon the mine showing the line of dip from the old sump at Emma to the engine-shaft at Brook, where the lode had failed, they would have quickly discovered that there was a uniform regular run throughout, from the point where the lode first proved unproductive west of Emma shaft, all the way to the Brook engine-shaft. If then they could have been shown the old sump at Emma, 124 fms. deep, with the good lode there, and the bottom of Pickstone's shaft, 140 fms. deep, with the good lode also there, they would have seen that both of these shafts had passed through the unproductive hard ground and entered the fine clay-slate of the same character which precisely surrounded the lode when so productive of copper ore above the hard bar.

They would have seen in making these examinations that while the lode was passing through the hard bar it was squeezed into a small space, and they would have further seen that on entering this splendid stratum of clay-slate it opened out to a lode of the finest character, 18 ft. wide, having as finely defined walls as any miner could wish to look at, with 4 ft. full of rich ore on the footwall, and not a foot of the lode throughout the 18 ft. wide without good copper; and all this immediately beneath the hard bar of ground at each shaft, and which shafts are about 70 fms. apart on the run of the lode. Had these points been brought under their observation, such facts would have prepared them to inform the shareholders that never in their experience, or in the records of mining in Devon or Cornwall, has such a lode under similar circumstances failed to give lasting and highly profitable results. With a few facts of this kind demonstrated to these agents, and the fact, which they saw for themselves, that for 300 fms. long a valuable lode had been worked above the hard bar, and which sent more than 250,000 £. worth of ore to market, it would readily have shown them that, with the greater compactness of the copper lode, from the pressure of the hard bar above, and with a depth of 100 fms. of this fine clay-slate, it would, if only worth 30 £. per fathom, give a return in copper value that would satisfy every shareholder, without going far enough east to bring into requisition the new shaft now sinking. There is so much prize expressed by certain mining people, at the confident estimate made of the depth of the clay-slate referred to, that with your permission I will quote the words of the late Capt. Charles Thomas, of Dolcoath, thereon:—

"Take a careful survey of the whole set, in order to ascertain, as far as possible, the extent and depth of that stratum in which the lodes are embedded, and with what other rocks, if any, the lode is likely to come in contact in depth. When satisfied on these points, the character of the lode, and the suitability of the stratum, do not hesitate to lay out your plans on a broad scale."

By observing these plain instructions at the South Devon Mines the hard rock and the fine quality of the succeeding clay-slate were well known long before either was met with in the shaft or any part of the mines. The stone-breaker which has caused so much loss in the mode of dressing was proved by the operation on the halvan heaps to act as represented by Devon Consols agents, set forth in the *Journal* Nov. 27, 1880. These heaps were valued by Capt. Clemo and Capt. Hooper to be worth 14,000 £., and after Capt. Hooper had operated upon them through the aid of the stone-breaker for some weeks the whole result of the dressing was that no value was left to report upon, which confirmed in the minutest particular the correctness of the Devon Consols agent's judgment and decision "that instead of obtaining 6000 or 6000 tons of ore, worth 13,000 £. in the six months, the whole would be totally worthless, and they would have nothing to do with a stone-breaker on their dressing-floors."

The mistake in keeping this machine in operation at the South Devon United Mines, and the other mistake of sinking Martin's shaft at the eastern part of the set are the two serious errors that

have cost the shareholders the loss of much of the capital first subscribed and many dividends which would have reached their pockets. If the directors abandon both of these projects and throw energetic management into the concern they will efface all recollection of the past before the end of June, 1882, and give great satisfaction to every shareholder, as the returns of copper to the present time from these mines is small, compared with what will go to market from the 100 fms. in depth, below the 140 at Pickstone's shaft with energetic management.—*Feb. 2.* C. ROBINS.

WHEEL COATES MINING COMPANY.

SIR.—A few months ago, owing to the high quotation of Wheel Coates shares in the *Mining Journal*, and to the good output of tin, I purchased 10 shares at a small premium. I soon heard that it was proposed to voluntarily wind-up the company, and convert it into a Cost-book concern. I carefully read the advice contained in the *Mining Journal* of Dec. 3, 1881, and acting upon that advice I sent a notice, duly signed and witnessed, to the liquidators, asking them either to buy my interest or to abstain from winding-up the company.

The next intimation I get is a call of 1s. 6d. per share, and on enquiring I am informed that the mine is sold for 1250 £., and that the liquidators hope to return 2s. per share to the shareholder. Can you inform me, first, if I am compelled to pay the call; and, second, if I can claim anything beyond the aforesaid dividend of 2s. per share? I shall look in your *Journal* for your opinion, if you will kindly oblige me by inserting it.—*Folkstone, Jan. 31.* W. H. WILLIS.

[There can be no question that you have acted properly in the matter; and the winding-up having been proceeded with you are entitled to the fair market value of the shares on the day of your notice. Subjoined are the portions of the sections which immediately bear on your case.]

Companies Act, 1862, Sec. 161. "That if any member of the company being wound-up who has not voted in favour of the special resolution passed by the company of which he is a member at either of the meetings held for passing the same expresses his dissent from any such special resolution in writing addressed to the liquidators or one of them, and left at the registered office of the company not later than seven days after the date of the meeting at which such special resolution was passed; such dissentient member may require the liquidators to do one of the following things as the liquidators may prefer—that is to say, either to abstain from carrying such resolution into effect or to purchase the interest held by such dissentient member at a price to be determined in manner hereafter mentioned, such purchase-money to be paid before the company is dissolved, and to be raised by the liquidators in such manner as may be determined by special resolution."

Same Act, Sec. 162. "The price to be paid for the purchase of the interest of any dissentient member may be determined by agreement, but if the parties dispute about the same such dispute shall be settled by arbitration under the Companies' Clauses Consolidation Act."

The price quoted at the date of the special resolution by those interested in making the change being 1½ to 1¼; a dissentient member would be entitled to about 1½. 10s. per share as the value of his interest.]

LEAD HILLS MINE.

SIR.—I was glad to see "R. T. M.'s" letter in the *Mining Journal* last week, as it shows the shareholders will at last make some enquiries at the next meeting into the extraordinary way in which this mine has been managed by the directors. I was prevented attending the last meeting, as there are several matters I should have brought before the meeting. We have received no dividends for years, and yet in the last four years it will be found the directors have helped themselves to 2400 £., their arduous duties consisting of signing cheques, with the exception of one director, who, has I see, charged 5 £. 5s. for travelling expenses to inspect the mine. I do not know that the secretary's salary is excessive, as I believe all the work falls on him, but this I do know, that we have carried this mine on quite long enough for the benefit of our directors. *Feb. 1.* A SHAREHOLDER.

EAST WHEEL ROSE.

SIR.—Referring to the remarks in last week's *Journal* upon the interest being taken in Cornwall to the exceptionally rich silver-lead ore being raised (above adit) from Innes' lode, I would ask, for the information of my fellow-shareholders to insert these few lines from me. They are to say that I have this week seen, at the offices of the company, a sample of the ore from Innes' lode, and as I happen to be able, from no slight experience, to distinguish rich ore from poor, I can testify to the richness of the sample. It seems that in Innes' lode we have a large and rich mine above adit, which, for the information of the non-technical, means that the ore can be raised and sent to market without the use of the pumping-engine. It is estimated, I learn, that we have upwards of 600 fms. in length of this lode upon new ground. The estimated average value of the ore now being raised daily is, I am informed, 12 £. per fathom, and the cost of getting it is 3 £. The working profit to the company at this moment, therefore, will be 9 £. per fathom. Certainly we who have retained our shares in this company are to be congratulated upon this (to me) unexpected source of profit, so independent of the water in the mine. I understand that the 90-in. engine is being completed as rapidly as possible, and that in about a month after the starting of that engine (which is of itself able to fork the mine) the 100-in. engine will be ready to start. My individual opinion—as one knowing something of mines and mining—is that before long the production of silver-lead ore from East Wheel Rose will surprise many. *AN ORIGINAL SHAREHOLDER.*

SHROPSHIRE LEAD MINES.

SIR.—We believe that the East Roman Gravels people have discovered quite a new run of ore close to their shaft, which is said to have every indication of permanence and increasing in value as the mine shall be deepened. This company deserves a good mine, and we are quite satisfied that there is no finer piece of mineral ground and lodes in Salop than their sett and lodes. They have lately put boring machines to work, and so will make better speed in sending out the levels, &c. We shall be much surprised and disappointed in our expectation of this mine if it does not become a permanent dividend mine when further developed.

The Roman Gravels Boundary new company have commenced a new shaft to come down on the north end of the Roman lode, and it is generally believed they will find it rich under the shale band in their sett, and that they will have a rich mine. The north end of the lodes of East Roman Gravels, or at least part of them, will be within working distance of the new shaft. We shall be glad to see them making good progress, and we miners feel sure success is before them, or we may say at present beneath them. We hear that they are trying to let the shaft to sink to a party who will use boring machinery. *A SHROPSHIRE MINER.*

COPPER ORE DRESSING.

SIR.—Much has been said, and many ideas have been expressed, regarding the dressing of tin, which, by-the-by, is still finding its way into the Red River, and I have no doubt small quantities always will so long as the ores are dressed in the ordinary way. But though we hear little, if anything, said regarding the dressing of copper ores, I am inclined to think there is room for improvement in the dressing of this mineral also. I do not refer to the waste committed in dressing copper ores, but to the very low-class ores sent into the market, especially from the large mines. Everyone who understands copper must know that 6 or 7 per cent. produce is a very low percentage, and we seldom see the average produce of Cornish copper ore above this. High-grade ores are worth more per unit than poor quality ores, and I beg to ask mine managers—why not send to market an article of 14 or 15 per cent. produce instead of 6 or 7 per cent? In former times, when hand labour performed the greatest part of the dressing of ores, there may be good reason for producing low-grade ores; but now that machinery has reduced hand labour to a minimum, and the classification of orestuff may be rendered so perfect and complete, I see no reasonable excuse whatever for the present inferior dressing of our copper ores. It may be advanced, the ore occurs so much mixed up with gangue as to render more complete dressing very expensive; but unless copper ores are largely associated with iron pyrites it may be easily, cheaply, and without excessive waste of ore separated from quartz and the other impurities with which copper ore is usually found. I am almost convinced a more complete system of dressing would add largely to the income of most of the copper mining companies, and I should like to bring about a sound practical discussion on this important question. Why

not dispose of the bulk of the waste contained in copper into the waste heaps before it leaves the mines instead of transporting it with the genuine article long distances to the smelting furnaces? I am not surprised that smelters pay so little for poor ores such as some of the mines produce. The commonly occurring copper ore—yellow copper—has a specific gravity of 4.2, while quartz, &c., has a specific gravity of 2.6, ample room for separation if properly classified. No doubt some will say I know very little about it, but I would like for some one to correct me if I am wrong; 14 per cent. copper is worth at present about 9s. per ton, and to my mind there are few mines that may not very advantageously produce ore of this class. Why not expend a little more in dressing, and thereby increase the income of the company? Shares would sell better, and there would be more confidence in copper mines all round.

JUSTICE.

CALLINGTON DISTRICT.

SIR,—A few remarks respecting this district and its mines may be of some interest. Kit Hill United has one or two good points to come off for tin in the Tunnel level; having seen those lodes, and being aware of their productiveness formerly, I look forth to a very profitable mine in depth, and quite independent of the south portion; but considering the fine lodes I have seen in the former working, I should not be surprised to hear of a valuable discovery shortly. Silver Hill Tunnel appears to have entered a good run of ground for the production of copper ore, and it must be considered satisfactory, seeing the work has been pushed forward which throws some light on the value of the adjoining mines, and if activity is shown in the development in my opinion the shareholders will be rewarded for their outlay. I think yellow ochre is to be found in large deposits should it be required. Pillaton Manganese Mine attracts considerable attention in the district; the discovery here was not in the least expected, and would never have been made known likely had it not been for the inhabitants of Pillaton requiring a new parish road to be made in the slope of an immense hill. When the different adits are driven into this hill it is expected thousands of tons of high quality manganese ore will be taken out for the market. I am not aware if there is any discovery made at Whitford; I know of one or two points of great importance, which in all probability would lead to a valuable discovery, also at one or two other noted places if operations were resumed.—Feb. 1.

MINER.

THE WHEAL VOR DISTRICT.

SIR,—This valuable mineral district is creating no small amount of attention once more by the excellent discoveries of tin recently made at New Great Wheal Vor and Great East Vor. It seems that the old district has again commenced to shine forth in all the brightness of its former days. Hearing so much of the above-mentioned discoveries, and business taking me that way, I called at the mines and took samples from the many piles of tin stuff there. When I returned home I bruised and vanned them, and the show of tin surprised me, although I am a miner of the old school, and I candidly say that I never saw such rich work to the depth of 11 fathoms. I judged it to be half tin. I can fully agree with what your correspondent said in last week's Journal. In speaking to a great mineral agent here on the matter, and of how things were progressing in the Wheal Vor district relative to the above-mentioned mines, he said, "Mark me, their mines will be the star of the West." But where have been all the local talent in allowing the Londoners to take hold of the wealth that they have so long been treading under foot?

Redruth, Jan 31

PRO BONO PUBLICO.

THE GREAT WHEAL VOR DISTRICT.

SIR,—I have just been looking over some statistics of the Great Wheal Vor sett. There is nothing like an array of official figures; they carry might and authority with them, and I find one chapter of that enterprise shows that tin was produced from 1853 to 1877 to a value of nearly 700,000l. Some of the years produce better than others, but many of them yielded an average of more than 30,000l. per annum. I will see if I cannot find some statistics of the earlier workings; they would be very interesting just now. Indeed, the history of this district ought to be written, though hitherto it has not been. There is, however, enough to show that it is one of the grandest tin-bearing districts in the world, and there is as good ground in this locality for tin-bearing as ever yet was worked.

The operations at New Great Wheal Vor and at Great East Vor are steadily revealing mineral wealth, and the great feature which is now arresting so much attention throughout the county is that the lodes are as striking in size, value, and strength as any in Cornwall, although they are only a few fathoms from the surface, and where usually the lodes are not so rich in themselves, as indicative of further wealth below. I believe there are few other such lodes in Cornwall at a depth of 11 or 12 fms. If nothing beyond the natural developments of the present workings should take place, the actual discoveries may prove sufficient to benefit a whole generation of our mining population.—Helston, Feb. 1.

HUEL.

THE COAL AND IRON INDUSTRIES OF THE UNITED KINGDOM.—A new work under this title by our esteemed correspondent Mr. RICHARD MEADE, Assistant Keeper of Mining Records at the Museum of Practical Geology, Jermyn-street, will be issued in about a week by Messrs. Crosby Lockwood and Co. Besides a description of the coal fields and the principal seams of coal, Mr. Meade's book will include an account of the occurrence of iron ores in veins and seams, and a history of the rise and progress of pig-iron manufacture since the year 1740. Maps illustrating the position of coal fields and ironstone deposits throughout the kingdom will accompany the work. It need scarcely be said that the book will be very fully noticed in the *Mining Journal* as soon as it is ready for publication.

MODERN METROLOGY.—In noticing Gregory's British Metric System, it was pointed out that no possible advantage could result from its adoption, because all the inconvenience of making a change would have to be submitted to, and that none of the benefits to be anticipated from the adoption of the French metric system now practically adopted in Belgium, Spain, Italy, Holland, and Germany, as well as France, would accrue; so that it may be hoped that the proposed English system to be advocated in Modern Metrology, to be dedicated by permission to Mr. Gladstone, and published by Messrs. Crosby Lockwood and Co., will take the French metric units as the basis, unless it be intended to adopt the French system unmodified, and with no other variations than the change of names. The forthcoming work, which will be issued during the present month, is by Mr. L. D. S. A. Jackson, the author of *Hydraulic Manual and Statistics*, and as it will treat of the metric units and systems of the present century, it can scarcely fail to be of historic interest.

BURDETT'S OFFICIAL INTELLIGENCE FOR 1882.—Under this title Mr. HENRY C. BURDETT, F.S.S., the secretary of the Share and Loan Department, Stock Exchange, has just issued (London: E. Couchman and Co., Throgmorton-street) a large volume of about 1000 pages quarto, giving a careful *précis* of information regarding British, American, and Foreign Stocks; Corporation, Colonial, and Provincial Government Securities; Railways, Banks, Canals, Docks, Gas, Insurance, Land, Mines, Shipping, Telegraphs, Tramways, Waterworks, and other commercial, financial, and industrial companies known to the London market, and dealt in on the principal Exchanges. It appears that with a view to obtain an approach to accuracy the Stock Exchange Committee have added a Records and Statistical Branch, under the supervision of a second assistant secretary, to the Share and Loan Department, in which will be preserved the original prospectuses and reports for the last five years, and other documents affecting securities generally. Mr. Burdett points out that in the first edition of a work which comprehends so many intricate details, and which covers so wide a field, errors are unavoidable; but a glance at the details given with regard to which the facts are known to the reader will suffice to prove that inaccuracies are far less numerous than might have been anticipated. Mr. Burdett shows that the nominal capital of the joint stock companies formed and registered in London under the Limited Liability Acts since Jan. 1, 1863,

amounts to about 1,720,385,791l., and that 1400 companies, with a nominal capital of 110,000,000l., were registered during 1881. The total par value of the securities quoted in the official list is stated at 5,786,913,906l. As a volume of reference a work of this class is invaluable, and the amount of labour and research which Mr. Burdett has bestowed upon it must have been enormous. There is a good introductory summary, and the chapter of general information concerning, amongst other things, special settling days and quotations, railway companies, stamp duties, investments by trustees, the Married Women's Property Acts, crossed cheques, and forms in common use will prove exceedingly useful.

REPORT FROM CORNWALL.

Feb. 2.—The chief character of the present aspect of mining business may be summed up in one word—uncertainty. Naturally, notwithstanding the previous inactivity of the share market, there has been a further drop in prices, consequent upon the fall in the tin standards, and prices may be expected to fluctuate in like manner while the general condition of the tin market remains so speculative and uncertain. Nevertheless the prospects, apart from this casual manipulation, are so favourable that the present seems an unusually good time for the investing public, and indications are not wanting that some are acting in that belief.

It has been made to appear, and no doubt much to the satisfaction of our friends the "bears," that there was a drop of 6s. in the tin standards last week—one of 3s. being announced on Thursday, and what purported to be a second on Saturday. No wonder some little alarm was felt. The explanation, though simple, is not without its value, as showing how easily, and even without intention, the public may be deceived, now that the smelters do not pull together without exception in the old "one and all" fashion. The truth is there was no official drop on Thursday, though one firm did pay lower prices, and that the old standards continued officially unchanged until Saturday, when they were put down the anticipated 3s. by circular in the formal way. After all, do we not pay rather too much attention now to the so-called "standards," and too little to the current prices in the London market; and is not the real moral of this occurrence that the miners should place themselves in a position to be independent of the smelters if they chose by smelting their own produce. We have pointed again and again to the desirability and feasibility of this until we are fairly tired, but there is not the slightest indication either in good times or in bad that one of our leading mines will have the pluck to leave the rut of centuries, and go back to what, after all, is the original plan. That matters will come to this eventually we fully believe, but we frankly confess we see as yet no movement in that direction, and it may be a long time ere we shall.

There are some people who are not satisfied even with the East Pool account, though to most a profit of over 10,000l. and a dividend of 30s. must be amply satisfactory. Only if folk will speculate and buy undeclared dividends at 38s. 6d. that turn out 8s. 6d. short, while we can very well understand their disappointment, their position is so purely voluntary that it calls for very little sympathy. No doubt the dividend might have been larger, seeing that a balance of just 750l. was carried forward, but we think that a very wise discretion was exercised in placing that amount to the credit of the reserve fund, especially when we bear in mind the additional plant that have to be provided for. It is we suppose only natural, at any rate in mining enterprise, that when a concern is flourishing efforts should be made to do it injury; and, therefore, we are not surprised that the rumours should have been circulated that the extraordinary success of last quarter's working at East Pool has been achieved by "picking out the eyes" of the mine. Never, however, did baseless rumours have a more complete denial than when Mr. Martyn stated that in two levels only as much tin had been discovered as had been taken away in the whole of the workings, and what strikes us as very remarkable in the report is the excellent character of the mine all through. We did not refer before the meeting to the absurd rumour that it would be proposed to give the committee 500 guineas, but there may be some who needed, what we did not, the assurance that the idea had never been entertained.

On one point, and one point only, do we differ from the sentiments expressed at East Pool account. Camborne has asked for a subscription to its science and art classes, and hesitancy was expressed on the ground that if granted Redruth would surely want the like. Why could not East Pool do something for both? Mr. Lanyon's argument in opposition to the score that the East Pool adventurers are not merely local, but scattered over the kingdom, seems to us wholly wide of the mark. The object of the science classes is to improve the working capacity and abilities of the miners of the locality. In the advantage of that improvement East Pool must share, and the adventurers, therefore, would derive at least an indirect benefit wherever they may be. We trust this will be considered at the next account.

TRADE IN SOUTH WALES.

Feb. 2.—There is no better evidence for the continued activity of the steam coal trade than the quantity shipped since last report, 129,996 tons having been sent away from Cardiff, 30,635 tons from Newport, and 30,930 tons from Swansea. There was a rise in the price of house coal made on Wednesday last, the 1st inst., of which due notice was given. The advance is 6d. per ton. Mr. R. W. Perkins, of Bronllys Castle, has published a letter on the application of anthracite coal to marine steam-boilers, in which he says:—

It has always seemed a strange circumstance (I had almost said fatality) that the anthracite colliery owners have never been able to realise the necessities imposed by the fact that stone coal or anthracite, whatever superiority it may claim in respect to evaporative power, is nevertheless a fuel of naturally slow combustion, and that, consequently, its evaporative power cannot under ordinary conditions be so speedily developed as that of ordinary steam coal. Now, in proof of this I will refer to the statement, not of any hostile critic, but to those of one of the best advocates of anthracite that ever testified in favour of this coal. I refer to a letter dated Nov. 20, 1854, addressed to the late firm of Messrs. Richard Morgan and Sons, by Messrs. McKean and McKlarty, of Liverpool, at that time the owners of the Anglo-Italian line of steamships, after a two years' experience of the use of anthracite. It is not unimportant to bear in mind also that the comparison in this case is made between anthracite and bituminous (probably Lancashire or Cumberland) coal, and not Welsh steam coal. They state the saving effected by anthracite to have been:—

1.—Twenty per cent. in stowage space.
2.—Forty to 45 per cent. in fuel consumption; but they also say that all that is necessary for the successful application of anthracite is that there should be one square foot of grate surface to every unit of horse power in order to raise steam to the pressure required. Now we must presume that by horse power nominal, not indicated, is meant, and I believe it will be about accurate to estimate 100 NHP as equivalent to 450 IHP; but, according to the best authorities at the present day, the correct proportion in marine boilers is 12 to 14 square feet of grate surface to each unit of IHP. 450 IHP or 100 NHP need, if anthracite be used, 100 square feet of grate surface, whereas 450 IHP x 14 (the largest amount as at present allowed) = only 63 square feet. Anthracite requires, therefore, nearly 60 per cent. more grate surface than ordinary steam coal, a necessity which, assuming it to exist, must present a fatal objection to the use of anthracite in steam ships. That the necessity of some special application exists I have already declared, and I will further express the opinion that the application necessary to render anthracite suitable for marine boilers is even now most desirable, and will more and more become absolutely necessary in the case of all coals. The diminution in weight of boilers and the space they occupy on board ship, and at the same time the attainment of higher rates of speed, are now the two great aims of naval engineers. These aims can never be carried out to their full practical limit so long as the necessary acceleration of fuel combustion continues to be effected by chimney draught. Suction must be substituted by forced blast.

The amount of iron ore coming in at the present time is very large, 19,356 tons having arrived at Cardiff since last report, and 2050 tons at Swansea. At the latter port 5000 tons of pig-iron have been received for the use of the tin-plate manufacturers. This industry is giving evidence of recovery, and there is a probability that all the old works will be in full swing before long. Newport has sent away 2000 tons of iron during the week to New York, 2870 tons to South Wales, and 1100 tons to Bahia. The Blymney Works, according to the directors' report, are making about 96,000 tons of steel and iron rails per annum, in the proportion of two-thirds of the former to one-third of the latter. A new furnace has been put in blast at Briton Ferry. At Blaenavon the works are now lighted by electricity the same as at Ferndale, and there is a tendency to extend this movement to all the large works in South Wales.

The subject of the rating of royalties for local taxation purposes is being agitated here, and a gentleman well versed in the subject writes as follows:—"Not 100 miles from Merthyr a large firm rented an extensive tract of minerals from the lord of the manor at a nominal rent charge, and sub-let it to an adjoining firm at an improved royalty, which amounted, it is said, to from 20,000l. to 30,000l. a year for a long term of years, free of local taxation. In the year 1880 there was worked from a comparatively small estate within the Merthyr Union no less than 141,650 tons of coal. The improved royalties and wayleaves paid on the same coal, independent of landlord's royalty, amounted to the modest sum of 5899l., and was wholly free of local taxes. What can this be but an 'improved valuation?' The recipients of these enormous profits, as improved royalties, must be either occupiers or landlords. Which are they? According to Mr. Fowler ('Collieries and Colliers') the occupier of the property is rateable in respect of its improved annual value."

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Feb. 2.—The iron market has been taken somewhat by surprise this week at the action of the Earl of Dudley and Messrs. William Burrows and Sons. These firms issue circulars which virtually cancel those issued just after the Quarterly meetings, in which buyers were informed that new orders must be subject to prices to be specially arranged. The fresh circulars clearly intimate that the open market price of their lordship's bars is now again 8l. 2s. 6d., and that of Messrs. Burrows 7l. 10s. Sheets and plates are 2l. per ton additional. On "Change yesterday in Wolverhampton and to-day in Birmingham best sheets were reported to be in large demand at the recent 12 per ton advance. Galvanising sheets are scarcely so strong this week as last, as spelter is down 10s. per ton. Ironworks proprietors are wistful of getting round their large stocks of puddled bars, hence the puddlers are all busy. In the pig-iron trade common qualities of Staffordshire sorts are firmer, because they are shown to be suited to the Thomas-Gilchrist steel method. Prices are unaltered. Manufacturing coal is stiffer in price, consequent upon the inundation disaster at Pelsall.

An important meeting of the South Staffordshire Mines Drainage Commissioners was held in Wolverhampton on Wednesday. The chief business was the consideration of a proposition made by the General Purposes and Finance Committee to borrow 10,000l. to be secured on the General Drainage Rate, to provide money for the execution of surface works; and a second proposition to borrow between 25,000l. and 30,000l., to be secured on the Mines Drainage Rate of the Tipton district, to enable the Commissioners to execute the additional works. It was explained that the surface works proposed to be executed had been pointed out by the arbitrators in a report which they had made to the Commissioners a couple of months ago as absolutely necessary, and as calling for early execution. These works are distributed throughout the chief localities which came within the main drainage area. The underground works were to consist of the putting to work of pumping engines in the old Bolton district, which is now drowned out, and raising the water from that locality instead of allowing it to continue flowing over into the Tipton district, where its pumping could only be effected at greater expense and at less speed. It was stated that it would be to the material interest of the Commission that these works should be carried out, since their execution would, by unwatering the Bolton mines, enable the Commissioners to largely increase their income, for rates could then be levied where at the present time no coal was being raised. After some discussion both the loans were sanctioned.

The examination for mine managers' certificates under the Mines Regulation Act came off on Monday and Tuesday in Wolverhampton. There were nine candidates present out of twelve entered—a lower number than that of any preceding examination. Six of the nine were from South Staffordshire, and three of them had sat unsuccessfully last year. The other three were from Durham, Yorkshire, and Derbyshire. The following were the subjects taken:—(1.) Chemistry as applied to mining; (2.) mechanical engineering; (3.) surveying; (4.) practical mining. The examiners were—For subject 1, Mr. W. Fairley, of Beaudesert, near Rugeley (the Marquis of Anglesey's); for subject 2, Mr. Jonah Davies, C.E., (Wolverhampton); and for Nos. 3 and 4, Mr. J. Williamson, of the Cannock and Rugby Colliery Company, Hednesford.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Feb. 2.—At the ironworks and mines in Derbyshire trade has not changed much of late, and, as a rule, the workmen are well employed. In the lead districts a fair amount of business has been done, and the probability is that the production during the present year will be considerably in excess of the past one. The weather has been favourable for operations where the work is of an open character, which is the case at a good many places, for the want of capital causes the mining to be carried on in the most primitive manner. Of course this is not the case at all the mines, for at a few of them there is the best of machinery and appliances. At the collieries the men are working steadily, and the demand for an advance of wages appears to have been quietly dropped, seeing it was found that the time was most inopportune, for the price of coal had gone down instead of advancing. House coal has gone off tolerably well, and a fair tonnage has been forwarded to the Metropolis, although the weather has not been at all favourable, and the result has been a decline in the price, which is likely to come down still lower, for it is much higher than it ought to be considering the charge at the pits. But merchants have the power of charging what they please, no matter how low they can purchase at the collieries, and this will continue to be the case so long as the owners of coal mines allow merchants to have all the power, and of buying at a very low rate, and selling at a particularly high one. But the time will come when the coal consumers in the Metropolis will be able to purchase direct from the producer, and thus save the large profit that now goes to the middleman. Steam coal has been going off well for the time of year, the mildness of the weather being favourable for shipping, whilst an increased quantity is now being required for iron smelting, the output of iron having considerably increased by the new furnaces put in blast. A good deal of engine coal has been sent away of late, and the same has been the case as regards gas coal. The trade is in a tolerably healthy state, there being a good demand for both pig and finished iron. An improvement has also taken place as regards foundry material, and there is every appearance that a good trade will be done in gas and water pipes, for which the Staveley Works, as well as some others, have a high reputation. The steel works at Driffield are as busy as ever, the demand for Bessemer rails being most active.

The Sheffield trades, light and heavy material continue in a busy state, and there are orders in hand for some descriptions that will occupy several months in clearing out, so that even were no more to come in there is a good season's work assured. Brown's and Cammell's are busily engaged on steel-faced armour plates, for our own and other Governments, so that no notice has been taken of the views of Sir W. Armstrong, who lately denounced the building of armour-clads, advocating light and speedy vessels, unarmoured, but with rams and heavy guns. Ordinary plates for ships and boilers, as well as hoops, wire, and sheets, are in such request that the mills are running to their fullest extent. Bessemer makers are particularly busy at the present time, heavy contracts being held for rails and railway

EDINBURGH.—Messes, THOMAS MILLER and SONS, stock and share brokers, Princes-street (Feb. 2), write:—The consequences of the disturbed state of financial matters on the Continent have been felt in a further depreciation of nearly all classes of securities. The raising of the Bank of England's minimum rate of discount, coupled with a large withdrawal of bullion for Paris, had a very depressing effect. Prices, however, began to improve yesterday afternoon. During the week Caledonian shows a decline from 109½ to 107½; North British, from 93½ to 90½; Glasgow and South Western, from 121½ to 120½; Great North of Scotland, from 62½ to 60; Brighton Deferred, from 135 to 133; Chatham, from 28½ to 28½; Sheffield Deferred, from 51½ to 49½; Eastern Deferred, from 156½ to 154½. The price of gold has further decreased from those which ruled a month ago. The traffic returns for the last two weeks have shown a very satisfactory increase. Some preference and guaranteed stocks have been offered at lower prices, but

ould eventually be charged to capital account. The expenditure had, on the whole, been very reasonable, and except for the mistake made with regard to

the shaft the whole of the working expenses from the commencement would not exceed £6000, which was very little for a company commencing such operations. The arrears of calls amounted to £7000, and as they only had a balance of about £4000, at the present time it was quite clear that the company must be brought to a standstill unless the calls were paid. If the company were forced into liquidation the calls would be enforced, while there would be no prospect of getting anything back, whereas by coming forward now there was every reasonable prospect that they would derive great benefit. Besides, it was scarcely fair to the shareholders, who had paid that the arrears should be continued. (Cheers.) The directors would for the future rigorously enforce the 10 per cent. on the money outstanding, and they would take the strongest measures with which the law provided them for the recovery of these monies. (Hear, hear.) The company had fair prospects of success. It was a bona fide concern, and the value of the reefs in the Mysore district had now passed out of the region of speculation into that of proof positive. Their property lies directly on the run of the five reefs which have been proved to exist. The information received from their manager was also very encouraging. He thought that they, with other shareholders in Indian gold mines, had been over-anguine, in estimating the time that it would take to obtain results, but he was quite hopeful for the future, and being in a position to receive the most reliable and trustworthy information, he was confident that all things would come to those who knew how to wait. He then moved the adoption of the reports and accounts. Mr. BISHOP seconded the motion, which was carried unanimously.

The CHAIRMAN, in reply to a shareholder, said the directors' fees were £800.

Mr. CLAYFORTH asked whether any large amount was due on the shares held by the directors?—The CHAIRMAN replied that the directors held on Dec. 31, and still held, 8000 shares, upon which £11000 was then due for calls; but arrangements had since been made for the payment of the whole of that amount. (Applause.) The largest item of the arrears was £7500, by the shareholder to whose action he had referred to.

The CHAIRMAN, in reply Mr. PROBYN, said the expenditure would not probably for the present exceed £500, a month, including the expenditure in London. The report and accounts were then adopted. Messrs. James and Edwards, the auditors, were re-appointed.

The meeting closed with the usual compliments.

THE DEVALA PROVIDENT MINING COMPANY.

The adjourned ordinary meeting of the shareholders of this company was held on Thursday at the Cannon-street Hotel.

Mr. HERMAN SCHULTZ in the chair.

The SECRETARY having read the notice convening the meeting, The CHAIRMAN said: At the last meeting a resolution was passed that the report and statement of accounts be neither received nor adopted, and that a committee of three or more shareholders be appointed with full powers to investigate the company's affairs, to confer with the directors, and report to the shareholders as soon as possible. The holidays intervening, the committee did not commence their labours until the beginning of January, when they appointed a day to meet the board, without consulting the board whether it was convenient; and for that reason it was impossible to hold the meeting on that day.

Mr. KLENCK said that before the Chairman made any remarks with regard to the committee it was only fair their report should be read, and any remarks would be made on it afterwards.

The CHAIRMAN then read the report of the committee, and continued to remark that the directors could not be given greater proof of their bona fides than by giving the committee every facility. The resolution at the last meeting referred to the accounts. The directors had not been consulted, and they certainly thought that these gentlemen should have been brought without at least giving them some information as the books clearly showed to explain some of the charges which, as they now stood, were not justifiable. In their opinion they had tried in the circular which they had sent round to the shareholders immediately on the receipt of the committee's report to explain some of the matters, but of course the time had been very short to do that; and although they thought that they had answered every question touched upon in the report and explained their conduct, which they had nothing to reproach themselves with. If the answers contained in their report were not sufficient they ought to have a direct refutation of anything that might be brought to the committee had gone into the accounts, but the report, so far as it could, did not substantiate any charge. The directors in their short report had not explained the law expenses as fully as might be desirable, but Mr. Robins would, no doubt, give details.

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The thanks of the meeting were voted to the committee, and also to the Chairman, and the proceedings then terminated.

COLAR GOLD MINING COMPANY.

The ordinary general meeting of shareholders was held at the Cannon-street Hotel, on Tuesday, Col. LINDSAY in the chair.

Mr. BEAUMONT (secretary) read the notice convening the meeting.

The CHAIRMAN said—The annual report has now been in your hands for several days. With your permission I will, therefore, consider it as read, and proceed to make a few remarks before moving its adoption. The accounts you will observe are brought down to Oct. 30. Since that date 12,500*l.*, or 5*s.* per share, has been called up, thus making the shares 15*s.* paid. As it takes at least two months before the Indian accounts are received, it was impossible to bring the accounts up to the end of the year for this meeting. There is one item to which I wish to call your attention—404*l.* for Indian law charges. This represents the stamp duty on registering the purchase and conveyance of the property. We have lately been informed that nearly the whole of this sum will be refunded to us, as the Dewan of Mysore has ruled that a stamp fee of 5*s.* is all that is necessary. As regards working at the mine, we have nothing of importance to communicate. Any information we thought might be of interest to you has been communicated by circular, or published in the public press from time to time. Your property is managed at present by Capt. Roach, a miner of experience, and recommended by Mr. John Darlington, the consulting engineer of the company, who will no doubt inform you that he places the greatest confidence in Captain Roach's ability to carry on all mining operations in a thoroughly professional manner, and conscientiously forward the interests of the company in every respect.

Capt. Roach arrived on the property in January last. At that time it was a barren waste, with nothing to guide his plan of operations but some outcrops of quartz and vestiges of old native workings. Several prospecting or trial shafts were sunk, most of which had been abandoned, at least for the present. In the shafts marked Nos. 1 and 2, and a shaft west of the pumping shown in the plan which accompanies the report, he has succeeded in meeting with auriferous lodes.

This plan, I may remark, is not perfectly accurate, as it is prepared from a rough sketch sent from the mine some months since, and the position of the shafts commenced since the time have been worked with the information derived from Capt. Roach's reports, and not from any survey plan. The most important lode as yet met with is in No. 2 shaft; the water level was met here at a depth of 72 ft., were cross-cutting was commenced both east and west, or at right angles to the known run of the reefs. In the west cross-cut, at 42 ft., the lode was encountered. Capt. Roach then drove on the lode north and south. The stone here promises well, as from the reports it will be seen a good show of gold is obtained from every part of crushed stone. To make room for working underground the stone from this reef is being sent to surface, and no doubt a great quantity of it must have accumulated by this time. Capt. Roach has been instructed to treat at least 100 tons of this stone as soon as he is in a position to do so without interference with other work. The result of this trial will be more satisfactory than any assay made from small samples. Some of this stone was recently received at the office, and three samples of considerable size sent for assay to Messrs. Claudet, whose certificate showed they contained—No. 1, 4 ozs. 12 dwts.; No. 2, 19 dwts.; No. 3, 1 oz. 5 dwts. 12 grs., or an average of 2 ozs. 3 dwts. of gold per ton. Assays, however, are of little value except to show the stone is auriferous.

It is right to inform you of their intention regarding this trial crushing of 100 tons, as when it is completed and the work does not continue, as may, perhaps, happen, some disappointment may be felt and fears arise that our supply of stone has come to an end. We have the experience of a neighbouring mine further advanced in underground exploration to show us the quantity of stone is unlimited. We have also their work to guide us now in marking exactly the run of reefs. Mr. Bell Davies, a mining authority of high repute, has recently visited this district, and reported on several of the adjoining properties; his opinion of the company's mine—No. 2, the set adjoining our property is that the reef is proved to be the reef in the district are true fissure veins, carrying numerous auriferous pay shoots. The existence of at least five lodes is proved, one of which has been traced for $\frac{1}{2}$ mile in length. In our own property, where explorations are not so far advanced, we are working on one of these lodes and also on another which is either the champion lode or a new lode between it and the western lode. If you will consult the sketch plan in the report you will see the position and run of these lodes. It is impossible to ignore the impatience very generally expressed that no results had been attained as yet, it must be borne in mind that time is required to develop a mine in any part of the world, and that in India there are exceptional difficulties to contend with. Speedy results from a mine should no more be expected than immediate returns from a new line of railroad. Even in England, with every modern mining appliance ready at hand, it is considered to be quick work to obtain any result within two years. It is barely a year since the first spade was used on the property, and by this time a very great deal of work has been accomplished. Good and substantial houses have been built for the whole of your employees and the protection of your property. The whole of the heavy machinery at present required has been delivered at the mine, and lastly, a considerable amount of mining work has been done, and two or three auriferous lodes exposed at between 70 and 80 ft. from surface. There are two sets of Elephant stamps at the mine capable of crushing from 20 to 30 tons of quartz, and also heavy gravitation stamps, which, when in position, can treat 50 tons a day; this can be augmented to 100 tons without additional engine-power. The board are advised that the Elephant stamps are sufficient for all present requirements, and they have determined not to hurry the erection of heavy machinery until the mine is further developed. In conclusion, the Chairman moved the adoption of the report.

Gen. HARRIS seconded the motion.

Mr. COCKRELL: You say in the report that it takes two years to open a mine, and if you get any result it is very quick work.

The CHAIRMAN: I said it is very quick work even in England, where every appliance and skilled labour is always available, it would be very quick work.

Mr. COCKRELL: The Mysore has been at work five years.—The CHAIRMAN: On the contrary, about 18 months.

Mr. COCKRELL: What was the mine Messrs. Arbutnot set up the machinery for?

The CHAIRMAN: It was rather out of order to make remarks about another mine, but he might say the Oregum mine was opened by some gentlemen who had a belief in that property being gold-bearing. Some years ago they commenced operations, obtained a loan from Australia, and had very large expenses indeed. He might say that between 20,000*l.* and 30,000*l.* proved that the property was auriferous, and having proved that he might say they considered that it was much more advisable to bring the property home to England, and obtain the money from the public at large. It was too large a speculation for one firm to enter upon, or even for the small number of gentlemen who were then associated together. That was done, and for several years the mine was shut up entirely. It then commenced upon a very small capital, further proving the value of the mine, and since then it has changed hands.

Mr. COCKRELL: It has not shown any results?—The CHAIRMAN: I must decline to answer further questions respecting other mines.

Mr. STAPLES said the Mysore Mine was the pioneer mine brought out by Messrs. John Taylor and Sons, and whom there was no firm of higher standing. They had sent Mr. Bell Davies who had reported on that mine and practically on the whole world, and had said that so far as his opinion was concerned he believed they were true fissure veins, and that being so it would last in depth. He took it that the lodes

Act, and, therefore, as you may suppose, we have nothing really of any importance to bring before you. The accounts are not made up, as it is not usual to make them up except once a year. You are most of you aware of the circumstances under which this company has lately been turned into a Limited Liability company; but in case perhaps all the shareholders are not cognisant of this fact, it may be as well for me to state that we have carried on this mine for some two years as a Cost-book mine, and as the shareholders under that system were subject to calls from time to time to pay the current expenses of working and managing the mine, it seemed to be unsatisfactory to many of the shareholders, and it was decided by a majority to turn the company from a Cost-book into a Limited one. This has recently been done, and the shareholders in the original Cost-book company stand in the relationship of vendors to the Limited company, inasmuch as they receive the whole of the purchase money from the mine in fully paid-up shares. Consequently this company is in a position of being I think more favourably situated than most new companies that have been started for some time past, inasmuch as there is no promotion money, and there are no free shares. Consequently, the whole benefit that has been derived from the transformation from the Cost-book to the Limited has fallen to the lot of the shareholders exclusively. But as you are aware it was necessary, having stopped the calls of the Cost-book company, to create some new capital to carry on the working of the mine, and it was decided to create 20,000 in addition to the 30,000 shares given to the old shareholders for the property, in order to provide what we consider a sufficient amount of capital to meet all contingencies, and to provide against any future possibility of our requiring to create additional capital. But we deemed it expedient only to issue 3000 of the proposed 20,000 shares, because we calculated that sum would be sufficient to pay all the expenses of formation, and bring the mine into a sound paying condition. We have had some difficulties to contend with in the working of the mine, because the ground is of an exceedingly hard nature, some parts of it consisting of granite, which is the principal characteristic of the mines of this district. It is an important feature in connection with our property that we are in the heart of the richest tin and copper mining district in the world. The mines round about the Carn Camborne have given returns of tin and copper to the estimated value of 40,000,000l. sterling. Our immediate neighbour on the north—the Dolcoath—has returned in dividends something like 2,000,000l. sterling. On the south we are bounded by the South Conductor. That mine has paid profits estimated at over 40,000l. in dividends. Therefore it will be seen that our position is one of unquestionably great advantage. We lie in the heart of a rich district, we are between two of the richest mines in Cornwall, and we have reached a depth of something like 105 fms. The former workers returned about 50,000l. worth of copper. We have a mine for the plant, machinery, and development upon which certainly not less than 50,000l. had been spent by the former workers, and of which we derive the benefit. As I have said we are at the depth of 105 fms., and most of the adjoining mines made their riches at a considerably greater depth than the Carn Camborne has. The principal feature in connection with the Dolcoath was the change of its copper lodes into tin at a certain depth. We have passed through the copper, and judging from the stones of ore that have recently been broken there appears to be taking place a similar change. We have to hand today a report from our agent, which I consider to be exceedingly satisfactory. They speak very hopefully of our prospects, and express strong hopes of cutting into a very important lode shortly. On the whole, therefore, I think our future outlook was never better than at present, and it is rather to be regretted that the shareholders who have been relieved of all responsibility in regard to future calls have not come forward more unanimously than they have done to provide the necessary funds by taking up the 3000 shares which have been offered. I may say, as far as I and my co-director are concerned, that we have taken our fair share of them, having subscribed for 1000, and I think the least that we could have expected was that the remaining shareholders would have done their best to apply for the whole of the balance—2000, in order to place us in funds to carry on the mine in a satisfactory and economical manner. We do not want a larger dividend, and it seems curious that the shareholders have been so slow to come forward. But probably when they have seen the report which we are now about to read to them they may think it worth their while to assist in the development of their own property by subscribing this money. We as directors are acting for you for nothing. We simply want to see the concern brought into a paying condition, and are straining every nerve to do it, even to the extent of providing our own money by taking these shares, and if it were necessary I should say we should have no objection hereafter to take up more shares than we now hold. I am firmly convinced that when we get down to a certain point and explore the various lodes that we have there we shall not be obliged to call upon the shareholders for any fresh subscription of capital; we shall be in a position soon to believe to return good profits. It must be borne in mind that a discovery in a mine like the Carn Camborne, situated as it is in the heart of so rich a district, will prove a discovery that will enhance the value of the property five-fold within a reasonable time.

Mr. W. H. PYNK here read the following report of the agents, which confirmed the observations of the Chairman; also a letter from Capt. Southey which said that it was daily expected that the lode at the bottom of the mine would be cut.

The CHAIRMAN: I take that letter as meaning something very satisfactory. We may shortly hear of a good discovery in the bottom of the mine, if we do I do not think there is the slightest doubt but what we shall have to announce very soon that the Carn Camborne is not only paying all its current expenses but yielding handsome profits. I think that those shareholders who have not yet subscribed will see their way under these hopeful conditions to do so. It appears from the correspondence we have had that many shareholders who would have come forward have held aloof until they saw what some of the other shareholders would do. But it stands to reason if we were all to adopt that course, that hardly anything could be expected to result. I think that each shareholder who can see his way to do so for his own interest—for it is not for the interest of any other person because he will be simply supporting his own property—should come forward and subscribe for a certain number of the remaining shares. The money goes simply into the working of the mine for the purpose of bringing about profitable results, and those who are interested in the present company were also interested in the old one. They had been relieved from all further calls, and it is to their interest, and that of no other person that they should subscribe, as far as lies in their power, for the balance of the shares which we offer.

Mr. STILLWELL: What does the liability of the old company amount to?—The CHAIRMAN: About 6000l., a large portion of which has been paid off. According to the arrangement the new company takes over the old with all its assets and liabilities. That was the understanding that was entered into. Whatever the liabilities were of course the new company had to take over, because it simply amounted to this—the new company was virtually the old company as far as its proprietors were concerned, and although it might have been better to make a heavier call on the shareholders on the last occasion, and wipe off all claims, we were of course anxious to spare their pockets as much as possible at the time, believing that they would come forward and subscribe for the new shares. Now that matters are plainly put before the shareholders I hope some of them will be willing to take their proportion of these new shares. I should not object myself individually to take some more, knowing as I do the value of the mine and what the result will be when we get a little deeper, if the remaining shareholders would do the same.

Mr. STILLWELL: I thought when the last call was made it was thought amply sufficient to clear off all debts?—The CHAIRMAN: The fact is that when we decided to turn the company into a limited liability company a call was made which was deemed sufficient to cover outstanding liabilities and carry on the mine until the company was registered as a limited concern. But we were informed that we could not register our company so soon after having passed the liquidation as a Cost-book company. Consequently three or four months elapsed beyond the time that we anticipated, and hence the funds were required to carry on the mine during that period.

Mr. AGNEW: I recollect at the last meeting that the call was kept as low as possible. It was at one time proposed to have a heavier call, and when it was put to the meeting the feeling was in favour of a small call.

Mr. ENDEAN: The original Cost-book company has now been wound-up, and as regards the liability of 6000l. it is really only 3000l.; that arose because the transfer of the one company to the other could not take place as soon as it was expected. Now it has taken place, and I can say as regards the present company we are in a very sound position. The debts as they are called are really nothing to speak of. I have personally no hesitation in taking my proportion of new shares, so satisfied am I with regard to the future of the mine.

After a desultory discussion on the same subject, the CHAIRMAN, in answer to a question put by a SHAREHOLDER, said that he and Mr. Endean had taken 1000 new shares, and that they held 3000 of the old ones.

Mr. ENDEAN: What we want is simply to cut the lode at a productive point, and that is considered to be about the 105 fm. level, and below that point. There is no doubt that in two or three months we shall have something very important to say. People in the neighbourhood are anxiously waiting for the result of our operations. It is not a question of whether we have the lodes there or not, because we know for a fact that they are there. You will scarcely find a man who knows anything about this district but what will give you the highest opinion of the mine.

The proceedings were brought to a close by passing a vote of thanks to the Chairman and directors, which the Chairman briefly acknowledged.

GLASGOW CARADON.—The accounts prepared for presentation at the meeting in Glasgow on Monday show a loss on the 12 months ended December of 2522l. 13s. 11d. The directors' report states that the low price of copper has seriously affected the results, not only in the low price of ore realised from the sales, but also because the reserves in many parts of the mine would not have been profitable at the prices obtained, and it would not have been advisable, therefore, to have worked them. The directors regret the unfavourable result, but the prospects for the ensuing year are brighter. There is a favourable change in the ground about the south lode, similar to that in the 78 and shallow levels, where they found their best courses of ore, and the lode at the 114 is of the same character and under, easy to work, and if it continues to open out as at present they may confidently expect to considerably increase the output of ore, and then hope soon to return to their former state of prosperity.

[For remainder of Meetings see to-day's Journal.]

ELECTRIC LIGHTING.—Mr. Robinson, one of the Examiners of the House of Commons, gave his decision on Thursday in the cases of the British Electric Light Company (Limited), the Anglo-American Brush Electric Light Corporation (Limited), and the Electric Light and Power Generator Company (Limited). All the cases had been opposed when brought before the Examiner last week for the purpose of complying with the Standing Orders. Mr. Robinson now decided that the allegations of the opponent to the Bill had not been maintained, and that the Standing Orders had been duly complied with.

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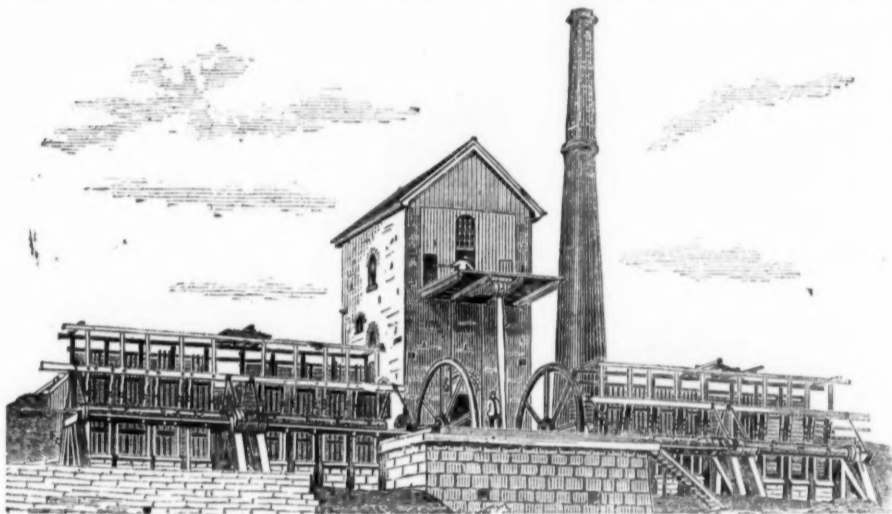
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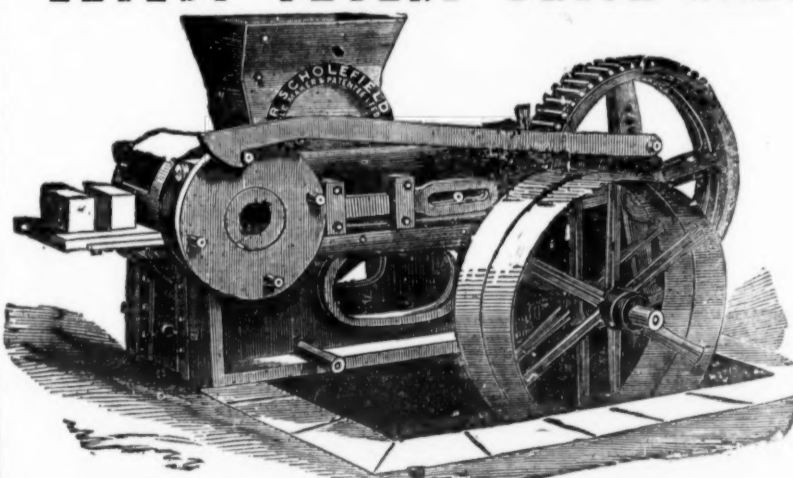
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R. SCHOLEFIELD'S LATEST PATENT BRICK-MAKING MACHINE.

R. S. begs to call the attention of all Colliery Owners in particular to his PATENT SEMI-DRY BRICK MACHINE, and the economical method of making bricks by his patent machinery from the refuse that is taken from the pits during the process of coal-getting, which instead of storing at the pit's mouth (and making acres of valuable land useless) is at once made into bricks at a very small cost, by R. S.'s Patent Brick-making Machinery. If the material is got from the pit hill, the following is about the cost of



production, and the hands required to make 10,000 pressed bricks per day:—

2 men digging, each 4s. per day	8 0
1 man grinding, 4s. 6d. per day	0 6
1 boy taking off bricks from machine, and placing them in barrow ready for the kiln, 2s. per day	0 2 0
1 boy greasing, 1s. 6d. per day	0 1 6
1 engine-man, 5s. per day	0 5 0
1 man wheeling bricks from machine to kiln, 4s. per day	0 4 0

Total cost of making 10,000 pressed bricks £1 5 0, or 2s. 6d. per 1000.

(SETTING AND BURNING SAME PRICE AS HAND-MADE BRICKS.)

N.B.—Where the material can be used as it comes from the pit, the cost will be reduced in digging. As the above Machinery is particularly adapted for the using up of shale, bind, &c., it will be to the advantage of all Colliery Owners to adopt the use of the said Brick-making Machinery.

THE MACHINES CAN BE SEEN IN OPERATION AT THE WORKS OF THE SOLE MAKER AND PATENTEE DAILY.
SCHOLEFIELD'S ENGINEERING & PATENT BRICK MACHINE WORKS
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"CORNISH" ROCK DRILL.

1ST SILVER MEDAL.
MINING INSTITUTE OF CORNWALL, 1881.

This machine has been constructed after a long practical experience in the requirements necessary for Cornish mines. The result has more than realised our expectations. Our chief objects in view were GREATER DURABILITY and LESS LIABILITY TO DISARRANGEMENT, but it has also proved itself MORE EFFECTIVE. (Vide Report)

MINING INSTITUTE OF CORNWALL.

CAMBORNE, 8TH DECEMBER, 1881.

SIR,—Having been requested by the Council to superintend the Rock Drilling Machine Contest, held at Dolcoath Mine to-day in connection with the above Institute, I beg to hand you the following report:—
The competing machines were the "Barrow," the "Cornish," and the "Eclipse"—each was fixed on the same mounting bar, and bored into the same stone. The result of the boring were as follows:—

Name of Machine.	Diameter of cylinder.	Diameter of Drill.	Time boring.	Depth bored.	Cubic inches of ground cut.	Cubic inches cut per minute.	Mean pressure per square inch.	Remarks.
	In.	In.	Min. Sec.	In.			Lbs.	
Cornish.....	3½	2	1 15	4½	14.1	—	—	
".....	—	1½	55	9	21.6	—	—	
Total.....	3½	—	2 10	13½	35.7	16.4	61	
Eclipse.....	3½	2	40	—	—	—	—	} Ran into Cornish hole; hole not properly watered.
" second try.....	3½	2	2 0	1	3.1	—	—	
" third try.....	3½	2	2 35	11½	35.3	13.6	60	
Barrow.....	4	1½	15	½	1.2	—	—	} Gland to mounting bar broke.
".....	—	—	2 0	8½	19.18	—	—	
Total.....	4	1½	2 15	8½	21.0	9.3	60	

To R. H. Williams, Esq., C.E., President of the Mining Institute of Cornwall.

I am, Sir, your obedient servant,
JAMES HOSKING, M.E.

Address—
HOLMAN BROS.,
CAMBORNE FOUNDRY AND ENGINE-WORKS, CAMBORNE, CORNWALL.

PATENT BRIQUETTE MACHINE.

GREAT SAVING NO WASTE COAL.

NO COLLIERY SHOULD BE WITHOUT.

These Machines utilise small coal or coke by making it into Briquettes or blocks of compressed fuel at the rate of 36,000 per day. The cost of preparing, mixing, and making is under One Shilling per ton. The Briquettes sell readily for Locomotives, Household, or other purposes. Full particulars on application to

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Collieries, Mines and Brickworks.

TESTIMONIALS

Messrs. Yeadon and Co., Leeds. CHARBONNAGE DE BERNISSART, PRES PERUWELZ (BELGIUM), JANUARY 4TH, 1878.
I continue to be perfectly satisfied with the work performed by the two patent Briquette Machines as well as with that of the Steam Engine, Mixer, &c., which you supplied a few months ago for the manufacture of compressed slack Briquettes, and that I can recommend them as being the best machines I know of, after having carefully studied all the Briquette Machines constructed at home and abroad.

SOCIETE DES CHARBONNAGES REUNIS DU RIEU DU COEUR ET DE LA BOULE. QUAREGNON (BELGIUM), SEPTEMBER 13TH, 1879.

Messrs. Yeadon and Co., Leeds. A. FRANEAU, Managing Director.
We are entirely satisfied with the erection and working of the two Briquette Machines, as well as the Steam Engine and Mixing Apparatus.

Messrs. Yeadon and Co., Leeds. CHARBONNAGE DE BERNISSART, PRES PERUWELZ, JANUARY 24TH, 1879.
I continue to be highly satisfied with the Briquette Machines which you supplied in 1877. They do their work very well, and produce the Briquettes very regularly, and of a good quality.

Messrs. Yeadon and Co. SOCIETE HOUILLERE DE VENDIN-LEX-BETHUNE, PAS-DE-CALAIS, DECEMBER 2ND, 1880.
I have the honour to inform you that the Briquette Machines work very well. The Briquettes are very well made. I am highly satisfied with your workmen, who have done their work very well.

The undersigned, Civil Engineer of Mines, Chevalier of the Legion of Honor, Consulting Engineer for the Mines de Vendin-lezto, Bethune, Pas-de-Calais, certifies that the Briquette Machinery for making Briquettes of Coal, supplied by Messrs. Yeadon and Co. the above Company is working to their entire satisfaction.
Lille, December 28, 1880

PATENT IMPROVED

Blake Ore Crusher,

WILL CRUSH ALL KINDS OF ORE AND EMERY STONE

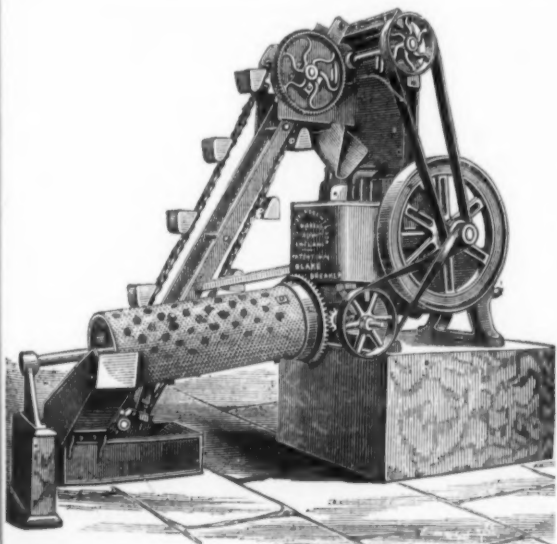
To fine grain powder, the required fineness being regulated by the mesh placed on the screen.

ROBERT BROADBENT AND SON
Have probably had more experience in the manufacturing of

STONE BREAKERS & ORE CRUSHERS
Than any other Firm in the World.

PRICES AND PARTICULARS ON APPLICATION.

PHOENIX WORKS,
STALYBRIDGE.



FOREIGN MINING AND METALLURGY.

The greatest firmness continues to prevail in the French iron trade. Pig has been in considerable request. Business has been done at 27. 16s. per ton in the Longwy group, and white refining pig has even been carried to 27. 17s. 8d. per ton. At Paris the situation is decidedly good, and iron merchants show considerably less disposition than they did last year to run after customers. Merchants evince, indeed, little disposition to dispose of their stocks, as they know they have little to gain from forgers, who are determined to at least maintain quotations during the remainder of the current year. Merchants' iron has been quoted at 87. 8s. per ton at Paris. It is thought that in the case of orders to be completed in the second half of this year some slight concessions would be made in prices in the St. Dizier district. The German ironworks have shown a renewed upward movement. Pig has been held with extreme firmness, and instead of making concessions the proprietors of blast furnaces seem rather disposed to advance their pretensions. It has been a matter of some difficulty to meet the demand for iron in bars in Germany, as it has continued unchecked. The basis price for bars has been carried in Westphalia to 71. 2s. per ton. In Silesia bars have scarcely made such a high price as this, but plates have been in strong demand, and a fresh advance in prices is anticipated; meanwhile purchasers experience considerable difficulty in securing anything like prompt delivery.

The Belgian iron trade still presents a firm tone; there is the same abundance of work as hitherto, and the same confidence is felt in the future. There has, however, been a slight check in the upward tendency of prices; perhaps, after all, this is rather a good sign than a bad sign. There is no lack of business, but the current of transactions cannot continually increase in volume, and a moment of comparative tranquillity unavoidably arrives. Belgian pig has been supported with firmness, and cannot now be procured below 27. 16s. per ton. The Athus Works have placed the whole of their production for the second quarter of this year, and the management decline now to enter into fresh engagements in advance; this is, of course, an indication of much confidence in the future. At Charleroi the tone of business is still favourable. Orders on export account continue abundant in Belgium, and numerous contracts are in course of negotiation; hence there is no cause for ironmasters to make concessions. Girders have maintained firmer prices with steadiness. Plates have been in request at 847. per ton, and producers have experienced no difficulty in finding purchasers. A steamer from Bilbao, laden with 500 tons of materials for the John Cockerill Company, has been refloated, and her cargo has been transferred to another vessel. The John Cockerill Company will experience accordingly but little loss in connection with what promised at first to be a rather serious mishap.

A touch of winter has at last been noticed in Belgium. It had been supposed that the winter was absolutely at an end, but after a lengthened period of moderate cold what the Belgians term some serious frosts have appeared. These frosts have, however, come late, and in all probability the time lost will not be recovered, and the winter of 1881-2 will remain one of the worst on record for Belgian colliery proprietors so far as domestic qualities of coal are concerned. Industrial coal, on the other hand, is still in good demand in Belgium, and prices have been maintained, without any downward tendency. Coke has been in good demand in Belgium; in the centre of Belgium especially this latter product is almost unobtainable. In the Borinage quotations for coke show a decided tendency to advance. Coal is not in increased demand in Germany, and no change can be reported in the general state of the markets. There is the same indifference as hitherto as regards domestic qualities of coal, and the same enquiry for industrial coal. In the Sarrebruck district a reasonably satisfactory state of things prevails. The production of December amounted to 459,293 tons, as compared with 453,458 tons in December, 1880. The production of the Sarrebruck basin for the whole of 1881 amounted to 5,130,408 tons; the deliveries of the year were 5,119,468 tons. The corresponding deliveries for 1880 were 5,195,691 tons.

EXTRACTING METALS FROM ORES.—In order to obtain silver from sulphurous ores containing silver admixed with lead, it had been proposed to heat the ore together with sulphuric acid to convert the lead into insoluble sulphate; at the same time sulphurous fumes are driven off, which are conducted into a leaden chamber to be converted into sulphuric acid by the action upon them of nitrous fumes obtained from nitrate of potash contained in the chamber. According to the invention of Mr. W. J. FULLER, of Lombard-street, the ore is taken after it has been heated together with sulphuric acid and washed to remove the soluble salts, and he saturates it with nitric acid, and again heats the mass to convert the silver and other metals, such as nickel and cobalt, into nitrates. All acid fumes driven off during this operation he conducts into the leaden chambers, into which the sulphurous acid driven off in the operation of heating the ore with sulphuric acid is passed. Subsequently the ore is lixiviated with water, thereby removing from it the nitrate of silver and other soluble nitrates and nitric acid. This solution, after previous concentration, may be used over and over again until saturated with metal, and may then be introduced into the leaden chamber to aid in converting the sulphurous into sulphuric acid, and the silver may be recovered from the residue removed from the chambers. Or the silver may be removed from the solution of nitrates by well known means, and the residual nitrates having been mixed with sulphuric acid may be used for dissolving out fresh quantities of silver.

GOLD AMALGAMATING APPARATUS.—An improved apparatus intended for the winning of gold from auriferous sand or ores containing gold reduced to a powdered state has been invented by Mr. F. CAMPBELL, of the Strand. The invention consists in the construction and use of a washing tank or tanks supplied with water, revolvable copper and other stirrers and quicksilver trough, combined with one or more riffle boxes fitted with a series of copper troughs arranged step fashion for the purpose of holding quicksilver and baize covered tables. The apparatus is constructed in practice partly of copper and partly of wood and iron or other appropriate materials. The sand or powdered ore is introduced in any convenient manner to the washer tank where the copper bladed stirrers are kept revolving. This tank is nearly filled with water, and is supplied with a bed or bottom of quicksilver. Here the sand is thoroughly beaten up and washed. The wet sand after the washer is well charged is then by the action of the stirrers beaten over the end of the washer to the riffle box, which is connected therewith by a spout or spouts; in the riffle box the sand passes by gravity over the quicksilver trough, arranged step fashion. From the riffle box by means of one or more spouts the sand passes on to a series of precipitating trays or tables, each fitted with one or two quicksilver troughs. After passing these trays the residue of the sand passes on to one or a series of tables covered with baize. The quicksilver amalgam is removed from time to time and treated for the recovery of the gold, and the troughs replenished with quicksilver as often as necessary.

CORNISH PUMPING-ENGINES.—The number of pumping-engines reported for December is 15. They have consumed 2203 tons of coal, and lifted 16.6 million tons of water 10 fms. high. The average duty of the whole is, therefore, 50,900,000 lbs. lifted 1 ft. high by the consumption of 112 lbs. of coal. The following engines have exceeded the average duty:—

Dolcoath—85 in.	Millions	55.8
West Basset—Thomas's 70 in.		63.8
West Tolgus—Richard's 70 in.		51.5
West Wheal Seton—Harvey's 85 in.		68.3
West Wheal Seton—Rule's 70 in.		71.3

HOLLOWAY'S OINTMENT AND PILLS.—Rheumatism and rheumatic gout are the most dreaded of all diseases, because their victims know that they are safe at no season, and at no age secure. Holloway's ointment, after fomentation of the painful parts, gives greater relief than any other application; but it must be diligently used to obtain this desirable result. It has been highly commended by rheumatic subjects of all ages and of both sexes, for rendering their attack less frequent and less vigorous and for repressing the sour perspirations and soothing the nerves. In many cases Holloway's ointment and pills have proved the greatest blessings in removing rheumatism and rheumatic gout which had assailed persons previously and at the prime of life.



MELBOURNE EXHIBITION.

GOLD AND SILVER MEDALS AWARDED for
Steam-Engines and Boilers, Winding Engines,
the Special Steam Pump, &c.



TANGYES LIMITED,

CORNWALL WORKS, BIRMINGHAM.

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TANGYE BROTHERS, 35, QUEEN VICTORIA STREET, E.C.

NEWCASTLE:

TANGYE BROTHERS, ST. NICHOLAS BUILDINGS.

MANCHESTER:

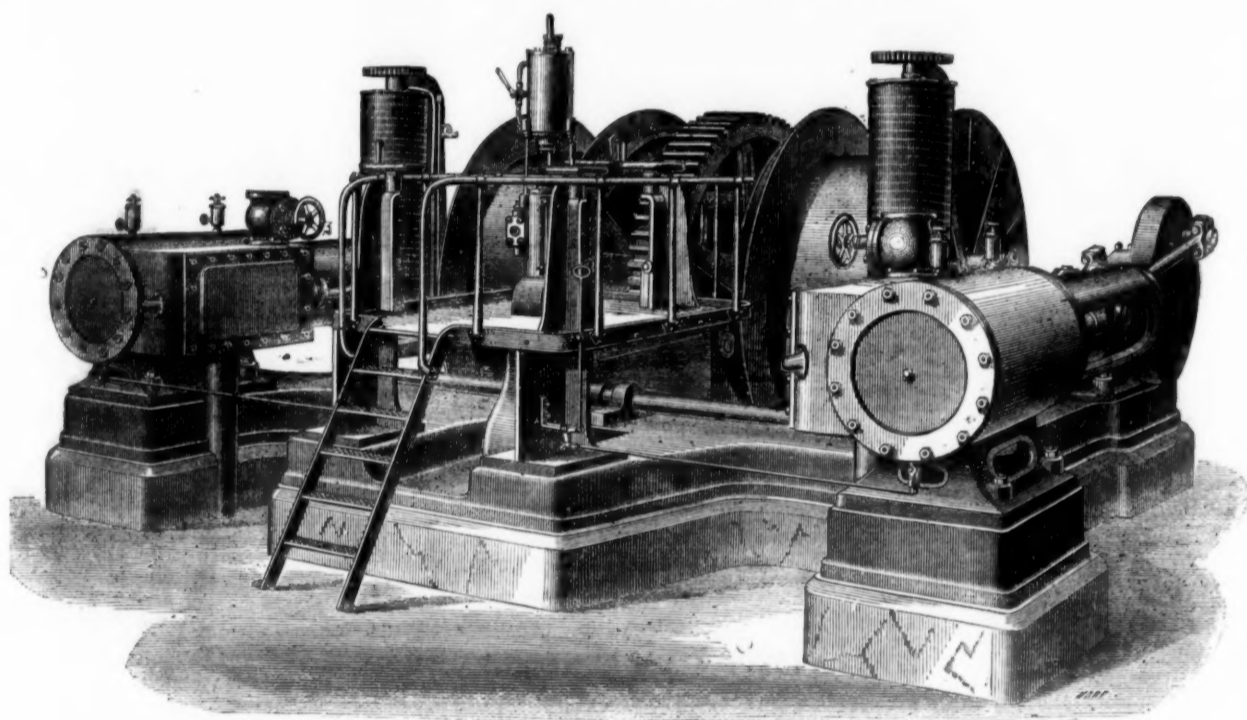
TANGYE BROTHERS, ROYAL EXCHANGE

GLASGOW:

TANGYE BROTHERS, ARGYLE STREET.

TANGYE'S IMPROVED HAULING & WINDING ENGINES,

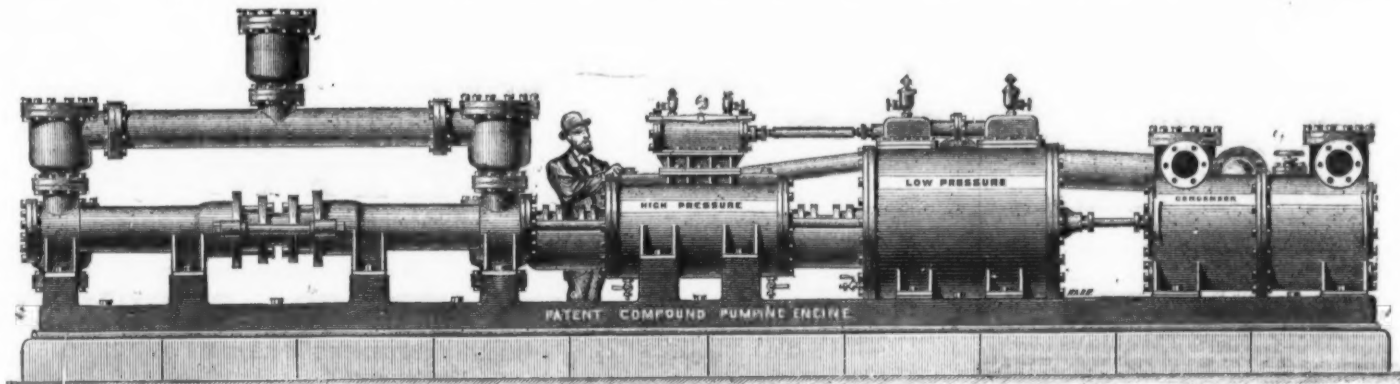
WITH STEAM REVERSING GEAR.



TANGYE'S DIRECT-ACTING COMPOUND PUMPING ENGINE

For use in Mines, Water Works, Sewage Works,

And all purposes where Economy of Fuel is essential.



SUCCESSFULLY WORKING at the NEWCASTLE and GATESHEAD WATERWORKS, the ADELAIDE, CHESTERFIELD
and BOYTHORPE, WYKEN, and other COLLIERIES.

C TATALOGUES FORWARDED ON APPLICATION.

INFRINGEMENTS.—H. R. MARSDEN having obtained information of infringements of his numerous Patents, hereby gives notice that he will PROCEED AGAINST ANY ONE HE MAY DISCOVER MAKING OR USING THE SAME.

PARIS EXHIBITION, 1878. GAINED THE GRAND PRIZE. THE TRIPLE AWARD. Gold Medal, Silver Medal, and Honourable Mention in competition with all the World.

THE BLAKE-MARSDEN NEW PATENT IMPROVED STONE BREAKERS AND ORE CRUSHERS.

ORIGINAL PATENTEE
AND ONLY MAKER.

ALSO PATENTEE AND ONLY
MAKER OF THE

H. R. MARSDEN, NEW PATENT FINE CRUSHER OR PULVERIZER,

FOR REDUCING TO AN IMPALPABLE POWDER, OR ANY DEGREE OF FINENESS REQUIRED,

GOLD AND SILVER QUARTZ, COPPER, TIN, ZINC, LEAD,

AND ORES OF EVERY DESCRIPTION;

Also Cement, Barytes, Limestone, Chalk, Pyrites, Coprolite, &c., &c. Several are already in successful operation in this country and abroad, and reference to users can be had on application.

NEW PATENT REVERSIBLE CUBING and CRUSHING
JAWS, IN FOUR SECTIONS,
WITH PATENT FACED BACKS, REQUIRING
NO WHITE METAL IN FIXING.

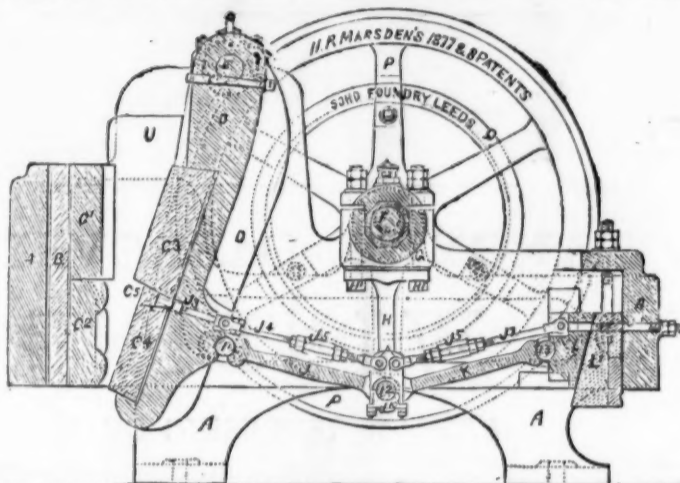
NEW PATENT TOGGLES.

NEW PATENT CRUCIBLE CAST-STEEL CONNECTING
RODS.
NEW PATENT WROUGHT-IRON CONNECTING RODS.
NEW PATENT RENEWABLE TOGGLE CUSHIONS &c.

OVER 4000 IN USE.

EXTRACT FROM TESTIMONIALS.
PULVERISER.

"I have great pleasure in bearing testimony to the merits and capabilities of your patent combined fine crusher and sieving apparatus. I have tried it on a variety of ores and minerals, and it pulverizes them with equal success. You can put in a small paving stone, and bring it out like flour."
"The power required to drive it is very small, being from 4 to 5-horse, and the repairs are almost nil."



FOR CATALOGUES, TESTIMONIALS, &c., APPLY TO THE SOLE MAKER,

H. R. MARSDEN, SOHO FOUNDRY, LEEDS.

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FIRST-CLASS GOLD AND SILVER MEDALS.

ADOPTED BY THE PRINCIPAL CORPORATIONS, ORE
TRACTORS, MINING COMPANIES, &c., IN ALL
PARTS OF THE WORLD.

ROAD METAL BROKEN EQUAL TO HAND, AT
ONE-TENTH THE COST.

EXTRACTS FROM TESTIMONIALS.

STONEBREAKER.

"The 15 x 8 stonebreaker gives perfect satisfaction. It produces more cubical stone than any others I have seen at work."
"Your 15 x 10 machine makes the best road metal I have ever put through a machine—in fact, comparing favourably with hand broken."

"Your 10 x 7 crusher at the Aruba Gold Mines will crush 80 to 100 tons per 24 hours of the hardest gold quartz to 1" size."

"Some of your testimonials do not give your machines half their due. I have seen men hammering away on a big rock for a quarter of a day which your machine would reduce to the required size in a quarter of a minute. I would guarantee that your largest machine would reduce more of the Cornish tin caps (which is the hardest rock of England) in a day than 200 men, and at 1-25th the cost."

GREATLY REDUCED PRICES ON APPLICATION.

JOHN CAMERON'S

FLY-WHEELS ON BOTH SIDES

SPECIALITIES ARE HIS

STEAM PUMPS

FOR

COLLIERY PURPOSES,

Specially adapted for forcing Water any height;

ALSO, FOR

**SINKING, FEEDING BOILERS AND STEAM
FIRE ENGINES,**

Of which he has made over 8000.

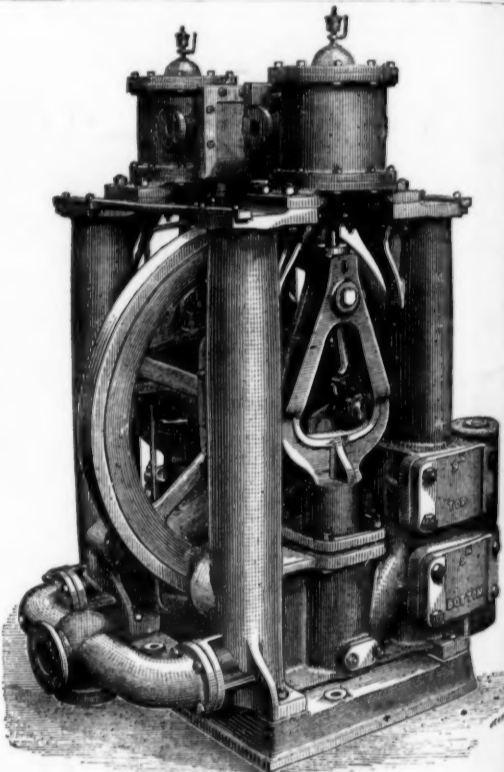
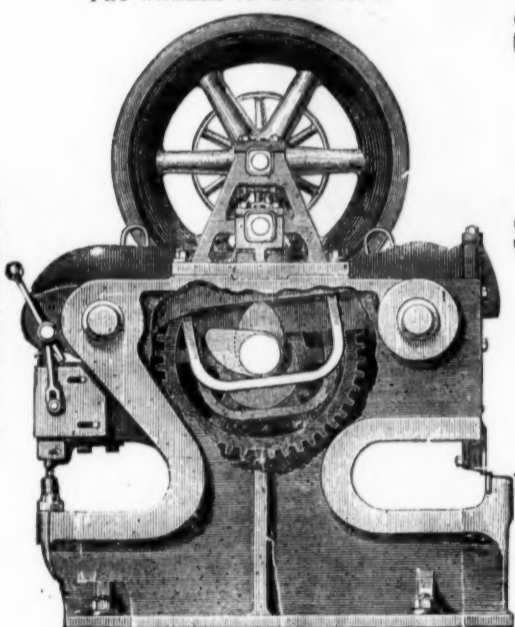
ALSO, HIS

PATENT CAM AND LEVER

PUNCHING AND SHEARING MACHINES.

Works: Oldfield Road, Salford,
Manchester.

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HULME & LUND'S SPECIALITIES.
DONKEY PUMPS, MINING PUMPS,
HORIZONTAL PUMPS, TAR PUMPS,
AIR COMPRESSORS,
FIRE ENGINES, STEAM ENGINES,
WILBURN IRON WORKS
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MAPS OF THE MINES, AND OF UTAH TERRITORY
FROISETH'S NEW AND REVISED MAP FOR 1875,—
Size 40 by 56 inches, scale 8 miles to the inch. Handsomely engraved, coloured in counties, showing the Towns, Settlements, Rivers, Lakes, Railroads, Mining Districts, &c., throughout the Territory, and all the Government Surveys to date. Mounted on cloth, £2; half-mounted, £1 12s.; pocket form, £1.
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HOPTON'S CONVERSATIONS ON MINES, between Father and Son. The additions to the work are near 80 pages of useful information, principally questions and answers, with a view to assist applicants intending to pass an examination as mine managers, together with tables, rules of measurement, and other information on the moving and propelling power of ventilation, a subject which has caused so much controversy.
The following few testimonials, out of hundreds in Mr. Hopton's possession, speak to the value of the work:—
"The book cannot fail to be well received by all connected with collieries."
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"The contents are really valuable to the miners of this country"—Miners' Conference.
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MINES AND QUARRY STANDS, STEEL DRILLS, SPECIALLY PREPARED INDIA RUBBER HOSE, TESTED IRON PIPES, &c.



Air-Compressing Machinery,

Simple, strong, and giving most excellent results.

Full particulars of rapid and economical work effected
by this machinery, on application.

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ENGINEER,

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J. WOOD ASTON AND CO., STOURBRIDGE

(WORKS AND OFFICES ADJOINING CRADLEY STATION),

Manufacturers of

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Crab Winches, Pulley and Snatch Blocks, Screw and Lifting Jacks, Ship Knees, Forgings, and Use Iron of all descriptions
WELDED STEEL CHAINS { FOR CRANES, INCLINES, MINES, &c.,
MADE ALL SIZES.